

Appendix G

Sustained Yield Test Technical Memorandum

Contract No.: EP-W-09-002
WA #: 023-RARA-02PE

Region 2 RAC2 Remedial Action Contract

Sustained Yield Test Technical Memorandum

Old Roosevelt Field Contaminated
Groundwater Area Superfund Site
Remedial Action
Garden City, Long Island, NY

November 9, 2011

The logo for CDM, consisting of the letters "CDM" in a bold, white, sans-serif font, set against a solid blue rectangular background.



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November 9, 2011

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PROJECT: EPA Region 2 RAC2 Contract No.: EP-W-09-002
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SUBJECT: Sustained Yield Test - Technical Memorandum
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Remedial Action
Garden City, Long Island, New York

Dear Ms. Kwan:

CDM Federal Programs Corporation (CDM) is pleased to submit the Sustained Yield Test Technical Memorandum for the Old Roosevelt Field Contaminated Groundwater Area Superfund Site in Garden City, Long Island, New York.

If you have any questions regarding this submittal, please contact me at 732-590-4638.

Very truly yours,

CDM FEDERAL PROGRAMS CORPORATION

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PSO: S2

Enclosure

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Section 1

Introduction

CDM Federal Programs (CDM) is conducting a Remedial Action at the Old Roosevelt Field Contaminated Groundwater Area Superfund Site (the site) located in Garden City, New York, for the U.S. Environmental Protection Agency (EPA), Region 2, under Work Assignment (WA) 023-RARA-02PE of the Remedial Action Contract (RAC) 2, Contract No. EP-W-09-002. To support construction of the groundwater extraction and treatment system, CDM conducted a sustained yield test, as detailed in the Remedial Design, Section 02525, Well Installation, for the Old Roosevelt Field Contaminated Groundwater Area Superfund Site. The objectives of the sustained yield test were as follows:

- Test the capacity of extraction wells EW-1S, EW-1I, and EW-1D to meet their design flow requirements.
- Obtain site specific aquifer hydraulic parameter data to verify values used in the groundwater flow model of the site.
- Obtain baseline specific capacity data for each extraction well.

This memorandum summarizes the sustained yield test design, equipment, methods, sampling, data analysis, and results. The observed test results are compared to the original design assumptions and the aquifer parameters used in the numerical groundwater flow model. Work was conducted in accordance with Section 02525 except that the flow rates used in the step-drawdown and sustained yield tests were increased, as discussed in this memorandum, to help meet project objectives. Sampling work discussed in this memorandum was conducted in accordance with the *Final Quality Assurance Project Plan (QAPP), Old Roosevelt Field Contaminated Groundwater Area Site Remedial Action, Garden City, NY* dated May 24, 2010 (CDM 2010a).

Section 2

Sustained Yield Test Design, Equipment, and Sampling

2.1 Sustained Yield Test Design

The sustained yield test consisted of the following elements:

- Background water level monitoring at selected wells from August 4, 2010 through September 7, 2010.
- Groundwater quality sampling to provide data for final treatment system design.
- Step-drawdown tests conducted on extraction wells EW-1S, EW-1I, and EW-1D on August 30, September 1, and September 2, 2010.
- Sustained yield test (pumping test) conducted from September 7 to September 10, 2010 during which the three extraction wells were pumped simultaneously at flow rates above their design capacity.
- Recovery water level monitoring from September 10 through September 13, 2010.

2.2 Water Level Monitoring Locations and Equipment Deployment

Starting on August 4, 2010, In-Situ® transducers were installed in eight conventional monitoring wells (MW-1S, MW-1I, MW-2S, MW-2I, MW-3S, MW-3I, GWX-10019, and GWX-10020) and five Westbay wells (SVP-2, SVP-3, SVP-4, SVP-9, and SVP-11). The Westbay wells were converted to monitoring wells by opening one pumping port in each well. Table 2-1 lists the conventional wells, the port opened on the Westbay wells, the dates of transducer deployment and recovery, and the data collection rate. The week before step testing began, In-Situ® transducers were also deployed in the three extraction wells (EW-1S, EW-1I, and EW-1D). Westbay wells SVP-5 and SVP-10 were each instrumented with five Westbay transducers to provide a vertical profile of water level data close to the extraction wells. The data from the Westbay transducers were stored on a Westbay Mosdax recorder installed in a weather proof metal box at each well. Earth Data, Inc., under subcontract to CDM, and their lower tier subcontractor Schlumberger, provided technical support and equipment to deploy the transducers in wells SVP-5 and SVP-10 and to open the pumping ports on the other Westbay wells used as monitoring wells. Well SVP-5 and SVP-10 transducer deployment information is included in Appendix A. The locations of all wells used for water level monitoring are shown on Figure 2-1. The cross section shown in Figure 2-2 trends north-south through the site and illustrates the groundwater flow model layers, site stratigraphy, and hydrogeologic conceptual model. The location of monitoring well GWX-10019, multiport wells SVP-4, SVP-9 and SVP-10, the extraction wells EW-1S and EW-1D, and Garden City municipal supply well GWP-10 are shown on the cross section with respect to the model layers. The location of the cross section shown on Figure 2-2 is shown on Figure 2-1.

2.3 Pumps, Flow Meters, and Water Treatment

Pumps used in the three extraction wells were Myers Ranger, 4-inch submersible pumps. The pumps were provided and installed by Uni-Tech, Inc. under subcontract to CDM. Uni-Tech also provided a trailer-mounted diesel generator to supply power to the pumps as well as flow meters with a digital readout of total and instantaneous flow. The pump specifications and flow meter calibration information are included in Appendix B. Water generated during the sustained yield test was piped to a temporary onsite treatment system operated by INTEX under subcontract to Uni-Tech. The system had a capacity of 250 gallons per minute (gpm). Water was pumped from the wells into a 20,000 gallon holding tank, treated using granulated activated carbon, and then piped to the storm drain on Clinton Road, west of the extraction wells. The storm drain runs into Nassau County Recharge Basin 124, located south of the Garden City wells and outside the area of influence of the extraction wells. Figure 2-1 shows the location of Clinton Road and the recharge basin.

2.4 Groundwater Quality Sampling

To provide data for treatment system design, four sets of groundwater samples were collected during the sustained yield test: 1) at the completion of well development; 2) at the end of the step test on each well, 3) at the start of the pumping phase of the sustained yield test, and 4) at the end of the sustained yield test. Samples were shipped on the day of sampling via FedEx to the EPA Division of Environmental Science and Assessment (DESA) laboratory in Edison, New Jersey. CDM used the sampling results to determine that an iron removal system was not needed as part of the final treatment system. This recommendation regarding treatment system design and a summary of the sample results were conveyed in a letter to the EPA Remedial Project Manager (CDM 2010b).

The first set of samples was collected from each well after development of wells EW-1S, EW-1I and EW-1D was completed. Samples were collected from a sample port on the development pump discharge line from each well. Samples were analyzed for EPA Target Compound List (TCL) volatile organic compounds (VOCs), total iron (Fe) and manganese (Mn), and field filtered Fe and Mn. Three environmental samples were collected in accordance with the QAPP.

The second sample was collected after the step test was completed at wells EW-1S, EW-1I and EW-1D. Samples were collected from a sample port on the pump discharge line. Samples were analyzed for TCL VOCs, total Fe and Mn, and filtered Fe and Mn. Three environmental samples were collected in accordance with the QAPP.

The third and fourth sets of samples were collected during and at the end of the 72-hour drawdown phase of the sustained yield test. Samples were collected from four points: a sample port installed on each of the three wells before the flow meter and a fourth sample port on the common header that combined the discharge from all three wells. The first sample set (A) was collected between 4.5 and 6.5 hours after the yield test started; the second sample set (B) was collected at the conclusion of the sustained yield test. Samples were analyzed for TCL VOCs, total EPA Target Analyte List (TAL) metals (including mercury and cyanide), filtered TAL metals, total suspended solids (TSS), total dissolved solids (TDS), hardness, alkalinity, nitrate/nitrite, and oil and grease. Eight environmental samples were collected in accordance with the QAPP.

Section 3

Aquifer Testing

3.1 Step Drawdown Testing

The design flow rate of wells EW-1S and EW-1I is 60 gpm, while the design flow rate of well EW-1D is 80 gpm. The original step test design called for flow rates ranging from 0.5 to 1.33 times the design flow rate at wells EW-1S and EW-1I, and 0.5 to 1.75 times the design flow rate at well EW-1D.

However, high flow rates with relatively little drawdown were observed at all three extraction wells during well development. Therefore, the step test plan was revised and the wells were pumped at the higher rates listed on Table 3-1 during the step test. Each step was two hours long. Higher flow rates were used to maximize the drawdown produced during the step test and thereby produce the most useful results.

Step tests were conducted at wells EW-1S, EW-1I and EW-1D on August 30, September 1, and September 2, 2010, respectively. At the conclusion of the step test at each well, a water sample was collected and sent to DESA laboratory for analysis as detailed in Section 2.3. Manual observations of flow rates and water levels in the extraction wells were made during the step tests and are included in Appendix C.

The flow rate and drawdown data from the step test were reviewed by CDM and the flow rates for the sustained yield test were set at 70 gpm for wells EW-1S and EW-1I and at 110 gpm for well EW-1D. This was done to maximize the stress applied to the aquifer.

3.2 Sustained Yield Test

Before the sustained yield test began, the water level recording rate was changed from 10 minute to 1 minute intervals on the transducers in most of the observation wells as listed on Table 2-1, to better capture water level changes in the wells. The sustained yield test started at 10:30 am on Tuesday, September 7, 2010, when all three extraction wells were switched on at the same time. Flow rates had been preset before the start of the test at 70 gpm for wells EW-1S and EW-1I and at 110 gpm for well EW-1D. Flow rates and water levels in the extraction wells were monitored manually at 15 minute intervals throughout the test. At least three people were onsite 24 hours per day during the sustained yield test to monitor the flow rate and water levels in the extraction and monitoring wells. Flow rates were adjusted as needed to keep them constant during the test. The manual flow rate and water level observations are included in Appendix D. The pumping phase of the test stopped after 72 hours at 10:30 am on Friday September 10, 2010.

3.2.1 Garden City Production Well Monitoring

During the sustained yield test, water levels and flow rates were monitored manually at two nearby Garden City municipal wells, GWP-10 and GWP-11. Water level indicators were installed in each well. During the first two hours of pumping, water levels were monitored at 1 minute intervals for the first

ten minutes and then at 10 minute intervals. After the first two hours, the water level and flow rates were checked every two hours until the end of the pumping phase. During the first two hours of recovery, water levels were monitored at 1 minute intervals for the first ten minutes and then at 10 minute intervals. After the first two hours of recovery, the water level and flow rates were checked every two hours until the late afternoon on Friday September 10, 2010. The flow meter on well GWP-10 was not working, so the on or off status of the well was recorded when the water level was measured. CDM consulted with Garden City Water Department and they reported the flow rate for well GWP-10 was 1,000 gpm. The flow meter on well GWP-11 was working and the well was on throughout the test, and pumped at a rate of about 1,200 gpm. Observations from well GWP-10 and GWP-11 are included in Appendix D.

3.2.2 Groundwater Sampling

As discussed above, groundwater samples were collected during and at the end of the 72-hour sustained yield test, in accordance with the QAPP. Samples were collected from four points: a sample port installed on each of the three wells, before the flow meter, and from a sample port on the common header which combined the discharge from all three wells. The first sample set (A) was collected between 4.5 and 6.5 hours after the yield test started; the second sample set (B) was collected at the conclusion of the yield test. The water quality parameters measured during sample collection are listed in Table 3-2.

3.2.3 Manual Water Level Monitoring

Manual water level monitoring was conducted periodically, before and during the sustained yield test, to check transducer function. All transducers functioned normally throughout the test. The manual observations are included in Table 3-3.

3.2.4 Precipitation and Barometric Pressure

Precipitation and barometric pressure data, for the period including background monitoring through the completion of the sustained yield test recovery, was obtained from the weather station KNYCARLE1, located near the site in Carle Place, New York. A total of 2.7 inches of rain was recorded during the background monitoring period on August 22, 2010, and 0.06 inches of rain was recorded on September 8, 2010, the second day of the sustained yield testing. Hydrographs indicate that precipitation did not impact water levels at site significantly during the pumping or recovery phases of the sustained yield test. These data are included in Appendix E.

Section 4

Data Analysis and Results

4.1 Hydrogeologic Conceptual Model

The hydrogeologic conceptual model for the site is illustrated in Figure 2-2 and shows the Upper Glacial aquifer, the Upper, Middle, and Basal Magothy aquifer, and the Raritan Clay. This conceptual model has been implemented in the groundwater flow model by dividing the system into 14 layers. After review of the drawdown data plots and the lithologic and gamma log data, CDM identified a local aquitard that, where present, separates the overlying Upper Glacial Aquifer from the underlying Magothy Formation. Lithologic data showed the aquitard thickness was typically 10 to 20 feet but ranged in thickness from 10 to 33 feet. This aquitard is located in Layer 12 of the groundwater flow model, which represents the Upper Magothy aquifer, and is assigned a horizontal hydraulic conductivity (K) of 60 feet/day and anisotropy ratio (vertical hydraulic conductivity, K_v /horizontal hydraulic conductivity, K) of 0.01 in the model. This K value is representative of the bulk K of the unit, which is about 100 feet thick, and not the K of local, relatively thin units like the aquitard. The aquitard was not included in the groundwater flow model due to its uncertain lateral and vertical extent and lack of information on its hydrogeologic properties.

The aquifer thickness used in the data analysis and to calculate K was defined as the distance from the bottom of the aquitard to the top of the Raritan Clay. The average thickness across the wells used in the sustained yield test was 452 feet. Details on well construction, elevation, and aquifer thickness for all pumping and observation wells are listed in Table 4-1. The groundwater flow model layers screened by each well used as a pumping or observation well during the aquifer test are listed on Table 4-2.

The three EW extraction wells, Garden City municipal wells GWP-10 and GWP-11, and most of the observation wells are completed in the Middle Magothy aquifer. The shallowest port, Port 10, in wells SVP-5 and SVP-10 is completed in the Upper Glacial aquifer. The deepest port, Port 1, in well SVP-10 is completed in the Basal Magothy aquifer.

Based on the existing groundwater flow model of the site, previous experience in the area, stratigraphy, and storativity values calculated from displacement data collected during this test, CDM selected a leaky-confined model for analysis of most of the sustained yield test data. Data from some shallow monitoring wells were analyzed assuming unconfined conditions because this model provided the best fit to the data. An anisotropy ratio of 0.01 was used in all analysis.

4.2 Background Water Level Monitoring

The background water level monitoring data were reviewed and showed that the pumping at Garden City municipal well GWP-10 significantly influences water levels in all the observation wells used during the sustained yield test. This is illustrated in the graph of water level data from the five zones (ports) monitored in well SVP-10 shown in Figure 4-1. The on/off cyclic pumping at well GWP-10

causes a variation of approximately 2 feet in the water levels observed at well SVP-10 in Ports 1, 3, and 5, which are in the same depth range as well GWP-10. The shallow zone, Port 8, is less influenced but still shows the regular pattern of drawdown caused by well GWP-10 turning on and off. The shallowest zone, Port 10, shows no significant influence from pumping in well GWP-10, probably because this zone is in the Upper Glacial Aquifer (see Figure 2-2). During the sustained yield test, well GWP-11 was observed to run all the time. Therefore, it was assumed in the analysis that well GWP-11 pumped at a constant rate before, during, and after the test and therefore did not cause any significant drawdown. Hydrographs of all the data from each well, including the background monitoring period and the sustained yield test period are included in Appendix F.

4.3 Step Test Analysis

The step test data were analyzed using the Hantush-Jacob method for step test analysis (Hantush and Jacob 1955) as implemented in Aqtesolve (Hydrosolve 2011). Figure 4-2 shows a graph of the drawdown data from well EW-11 during the step test. Transmissivity values ranging from 27,160 feet²/day to 57,850 feet²/day were calculated based on the step tests. Using an aquifer thickness of 452 feet, K values ranging from 60 to 128 feet/day were calculated. Storativity values ranged from 5.58×10^{-4} to 2.46×10^{-1} . These results are consistent with a leaky confined aquifer conceptual model. Plots of these analyses are included in Appendix G and the results are listed in Table 4-3. The displacement data observed during each step were used to calculate baseline specific capacity values, which are listed in Table 3-1.

4.4 Sustained Yield Test Analysis

Since production well GWP-11 was running before, during, and after the test at a constant flow rate, the well was left out of the analysis because it had no real effect on water levels in the observation wells. In the case of well GWP-10, it was pumping at 10:30 am on Tuesday September 7, when extraction well pumping started, and the well cycled on and off before, during, and after the test. To accommodate pumping at well GWP-10 into the analysis, CDM moved the start time of the sustained yield test back to 3:00 am on Tuesday September 7, 2010 which was when well GWP-10 started pumping immediately prior to the start of extraction well testing. This is practical but arbitrary because well GWP-10 cycled on and off for a long period well before the extraction well pumping started. The on/off cycling of well GWP-10 was incorporated into Aqtesolv which uses superposition to calculate the effect of multiple pumping wells on drawdown in observation wells. The start and stop times for the pump at well GWP-10 were estimated from water level data graphs from nearby observation wells and water level monitoring at well GWP-10.

The pumping period of the sustained yield test is clearly visible in the graph of data from SVP-10 shown in Figure 4-1. When the sustained yield pumping started, the water level in Ports 3 and 5 dropped by about 2 feet because these zones are close to and in the same elevation range as the screened zones in the nearby extraction wells. The water level in Port 1, the deepest zone, was less affected, while the water levels in the shallow zones, Ports 8 and 10 were not impacted.

The water level displacement observations from the extraction wells and observation wells during the sustained yield test were analyzed using Aqtesolv Professional software (HydroSOLVE 2011). Table 4-1 lists the well information and aquifer test analysis input parameters used in Aqtesolv. Based on site conditions, a leaky confined aquifer model was assumed and the Hantush-Jacob (1955)/Hantush (1964) solution for a pumping test in a leaky aquifer was applied to estimate aquifer parameters. In Aqtesolv, this solution also incorporates wells with partial penetration (Hantush 1961a, 1961b). Assumptions of this method are as follows:

- Aquifer has infinite areal extent
- Aquifer is homogeneous and of uniform thickness

- Pumping well is fully or partially penetrating
- Flow to pumping well is horizontal when pumping well is fully penetrating
- Aquifer is leaky confined
- Flow is unsteady
- Water is released instantaneously from storage with decline of hydraulic head
- Diameter of pumping well is very small so that storage in the well can be neglected
- Confining bed(s) has infinite areal extent, uniform vertical K and uniform thickness
- Confining bed(s) is overlain or underlain by an infinite constant-head plane source
- Flow is vertical in the aquitard(s)

These assumptions are generally met by the site conditions because the study area is small relative to the large portion of Long Island underlain by the Magothy Formation; in the study area the aquifer thickness average is 452 feet, as shown in Table 4-1, with little variation; all pumping and observation wells were partially penetrating; and the aquifer can be considered leaky confined.

4.5 Extraction Well Sustained Yield Test Analysis

Plots of the analyses conducted using Aqtesolv on data collected during the extraction well sustained yield test are included in Appendix H. An example of the plot of the analysis of data from well SVP-10, Port 3 is shown in Figure 4-3. Elapsed time starts when well GWP-10 turned on at 3:00 am on Tuesday September 7, 2010. The three extraction wells were turned on at 10:30 am that morning, at an elapsed time of 450 minutes, where a jump in drawdown is observed in Figure 4-3. These analyses included pumping from the three extraction wells and well GWP-10. The flow rate at well GWP-10 was assumed to be 1,000 gpm based on discussions with the water department. The on/off times for well GWP-10 were estimated by CDM from water level data collected in wells EW-1D and GWX-10019. Well EW-1D is relatively close to well GWP-10 and is completed in the same elevation range. Well GWX-10019 is the closest observation well to well GWP-10. The influence of well GWP-10 made the analyses more complex because the water level changes caused by well GWP-10 tend to mask changes caused by pumping at the extraction wells. In general, the water level graphs indicate that the change caused by the extraction well pumping occurred quickly and that, if well GWP-10 were not pumping, a new steady state probably would have been achieved within 8 to 24 hours of the start of pumping.

The results of the analysis of the water level displacement observations during the extraction well sustained yield test are summarized in Table 4-3. Transmissivity values ranged from 18,130 feet²/day to 82,430 feet²/day, with a median value of 48,180 feet²/day. Storativity values ranged from 3×10^{-4} to 1.53×10^{-3} with a median value of 8.15×10^{-4} . Using an aquifer thickness of 452 feet, K values were calculated and ranged from 40 to 182 feet/day, with a median value of 107 feet/day. These results are consistent with a leaky confined aquifer conceptual model.

In Table 4-3, the observation wells are sorted by the following depth intervals: shallow, intermediate, and deep. These intervals correspond to the respective extraction well screened intervals. Table 4-3 also includes the model layers screened by each well.

4.6 Distance Drawdown Analysis

To estimate the extent of the influence from the extraction wells, a distance drawdown plot was prepared using the maximum displacement caused by extraction well pumping at a time of 4,320 minutes after extraction well pumping started. The data used are listed in Table 4-4. The distance drawdown plot is shown in Figure 4-4. Separate plots were prepared for shallow, intermediate, and deep wells. In the case of the shallow wells, drawdown was less than that observed in the intermediate and deep wells because of the significant vertical distance between the screens in these wells and the extraction wells. In all three cases, the distance drawdown plot indicates the extent of influence of the three extraction wells is between 1,300 and 2,000 feet.

4.7 Well GWP-10 Test Analysis

To check the results of the analysis conducted on the extraction well test data, background monitoring period water level data from selected wells were analyzed using Aqtesolv Professional using only well GWP-10 as a pumping well. An example of the plot of the analysis of data from well SVP-10, Port 3 is shown in Figure 4-5. This was done to take advantage of the influence of pumping at well GWP-10 observed in many of the observation wells. Water level data from wells GWX-10019 and EW-1D, the closest wells to well GWP-10, were reviewed to estimate when well GWP-10 was on and off. Well GWX-10019 is screened above well GWP-10 and well EW-1D is screened over a similar elevation interval as well GWP-10. A flow rate of 1,000 gpm was assigned to well GWP-10. Based on observations during the sustained yield test, well GWP-11 was assumed to run constantly at a rate of 1,200 gpm during the observation period and was, therefore, not included in the analysis. The same interval of data was selected from each observation well for analysis. This interval covered a period of about 1,000 minutes and included one cycle where pumping at well GWP-10 started and then terminated at 750 minutes. The Aqtesolv analyses are included in Appendix I and the results of these analyses are shown in Table 4-3.

The results of the analysis of the water level displacement observations during the pumping at well GWP-10 are summarized in Table 4-3. Transmissivity values ranged from 18,770 feet²/day to 77,190 feet²/day, with a median value of 34,470 feet²/day. Storativity values ranged from 3.93×10^{-4} to 2.36×10^{-3} , with a median value of 1.16×10^{-3} . Using an aquifer thickness of 452 feet, K values were calculated and ranged from 42 to 171 feet/day with a median value of 76 feet/day.

When compared to the results from the extraction well analysis, the range of transmissivity and conductivity values from the extraction well and well GWP-10 analyses are similar but the median values for the well GWP-10 analyses are lower. The median transmissivity values calculated from the extraction well and well GWP-10 analyses are, respectively, 48,015 feet²/day and 34,470 feet²/day. The median K values calculated from the extraction well and well GWP-10 analyses are, respectively, 107 feet/day and 76 feet/day. These results are consistent with a leaky confined aquifer conceptual model. The results from the well GWP-10 and sustained yield test analysis are in general agreement. However, if the flow rate of well GWP-10 is not equal to the reported value of 1,000 gpm this would be one reason why these results differ.

In Table 4-3, the observation wells are sorted by the following depth intervals: shallow, intermediate, and deep. These intervals correspond to the respective extraction well screened intervals.

4.8 Extraction Well Pumping Influence on Monitoring Wells

Monitoring well clusters MW-1S/I, MW-2S/I, and MW-3S/I were installed to monitor the capture zone which is expected to develop after the extraction wells begin operation. The locations of the wells, shown on Figure 2-1, were chosen based on simulations of the capture zone using the groundwater flow model before the sustained yield test was conducted.

Each well cluster consists of a shallow (S) well with a 10-foot screen targeted at the -150 foot elevation and an intermediate (I) well with a 10-foot screen targeted at the -225 foot elevation (Table 4-1). These elevations correspond, respectively, to the approximate midpoint of the shallow extraction well, EW-1S, and intermediate extraction well, EW-1I, screened zones. The MW-01 cluster was installed approximately 280 feet northeast of the extraction wells and is intended to provide water level data inside the extraction well capture zone. The MW-02 cluster is located approximately 720 feet east-northeast of the extraction wells and is intended to monitor the width of the extraction well capture zone. The MW-03 cluster, located approximately 1,870 feet east-southeast of the extraction wells, is intended to provide water level data outside the capture zone of the extraction wells and Garden City supply wells GWP-10 and GWP-11.

While the 72-hour sustained yield test is not long enough to allow the full capture zone to develop, the drawdown data were checked to see if the extraction wells are influencing water levels in the monitoring wells. The water level fluctuation caused by pumping at well GPW-10 and the additional drawdown caused by extraction well pumping during the sustained yield test are clearly visible on the graph of water level data from wells MW-1S and MW-1I, which are included in Appendix F. Drawdown in well MW-1S attributable to extraction well pumping was 0.42 feet, and was observed within the first 1.5 hours of the test. Drawdown in well MW-1I attributable to extraction well pumping was 0.50 feet, and was observed within the first 1.5 hours of the test.

The water level fluctuation caused by pumping at well GPW-10 and the additional drawdown caused by extraction well pumping during the sustained yield test are also visible on the graph of water level data from wells MW-2S and MW-2I, which are included in Appendix F. However, the drawdown caused by the extraction well is significantly smaller than the drawdown in the MW-1S/I cluster. This is to be expected since this well cluster is about 2.5 times as far from the extraction wells as the well MW-1S/I cluster. Drawdown in well MW-2S attributable to extraction well pumping was 0.15 feet, and was observed within the first 1.5 hours of the test. Drawdown in well MW-2I attributable to extraction well pumping was 0.22, feet and was also observed within the first 1.5 hours of the test.

The water level fluctuation caused by pumping at well GPW-10 is clearly visible on the graph of water level data from wells MW-3S and MW-3I which are included in Appendix F. The extraction well pumping did not appear to cause any drawdown in either well MW-3S or well MW-3I. These results indicate that this well cluster should provide useful data, as intended, outside of the extraction well capture zone.

As discussed below, the sustained yield test was simulated using the groundwater flow model developed during the Feasibility Study. The results of the modeling indicate that the drawdown values simulated at well clusters MW-01S/I and MW-02S/I are in good agreement with the observed values, particularly during the cycling of GWP-10. Attached in Appendix J is the modeling technical memorandum, *Simulation of Aquifer Test and Model Refinement (April 2011)*, which was prepared by CDM.

4.9 Use of the Sustained Yield Test Results in the Groundwater Flow Model

The groundwater flow model was developed and used during the Feasibility Study to simulate the capture zone of various configurations of groundwater pumping wells and flow rates. The sustained yield test was simulated using the model as an additional means (other than groundwater head) to verify the hydraulic properties originally used in the Feasibility Study. Simulated changes in groundwater head were compared to water levels observed in wells during the background monitoring, when only well GWP-10 was running, and during the sustained yield test and hydraulic properties within the model were adjusted accordingly.

The sustained yield test was initially simulated using the K values and other aquifer parameters that were used during the Feasibility Study simulations. Under this scenario, the model predicted more drawdown in wells than was observed during the sustained yield test. This indicated that the model K in some layers was too low and needed to be increased. Additional lithologic data and gamma logs that were collected during the installation of the extraction wells and following the FS were reviewed and a relatively sandy layer was identified in the middle Magothy aquifer. The lateral extent of this unit is not well defined due to a lack of data, but was estimated by correlating the lithologic log and gamma log data collected during installation of the extraction wells to other gamma logs within the study area.

The hydraulic conductivity of this sandy layer within the middle Magothy was increased from an original value of 40 feet/day to 80 feet/day. This unit is identified in Table 4-5 as the “coarse zone” in the middle Magothy aquifer. This higher K improved the match between observed and predicted drawdown. A sensitivity analysis was conducted using K values of up to 180 feet/day for this coarse zone. The K value of 180 feet/day generally provided the best fit to data from well SVP-10, close to the extraction wells, but did not significantly improve the fit to data from other wells. A value of 180 feet/day is considered very high for the Magothy based on regional data (Smolensky et al. 1989).

The K values calculated from well GWP-10 pumping and from the sustained yield test are listed in Table 4-3 along with the final K values used in the respective model layer screened by the well. Table 4-5 compares the calculated K values, the original model values, and the revised model K values. The K values calculated from well GWP-10 pumping and the sustained yield test support the use of higher K values in the groundwater flow model.

To evaluate the effect of a range of K values on the extraction well capture zone, the groundwater flow model was used to simulate three scenarios: 1) the original aquifer parameters, 2) a K value of 80 feet/day assigned to the middle Magothy coarse zone and 3) a K value of 180 feet/day assigned to the middle Magothy coarse zone. These simulations show that as hydraulic conductivity increases the capture zone narrows and lengthens. The groundwater modeling procedures and results are discussed in detail in the *Simulation of Aquifer Test and Model Refinement* technical memorandum prepared by CDM which is included as Appendix J.

Section 5

Conclusions

The sustained yield test on extraction wells EW-1S, EW-1I, and EW-1D was successful and achieved its objectives.

- Extraction wells EW-1S, EW-1I, and EW-1D have the capacity to meet their design flow requirements.
- The hydraulic conductivity values calculated based on the sustained yield test were higher than those used in the original design, therefore the capture zones created by the extraction wells may be narrower than the original design. The width of the capture zone can be increased by increasing the flow rate.
- The distance drawdown plot indicates the extent of influence of the three extraction wells pumping together is between 1,300 and 2,000 feet. The extent of influence will be greatest in the upgradient direction.
- Transmissivity values calculated from the extraction well sustained yield test ranged from 18,130 feet²/day to 82,430 feet²/day with a median value of 48,180 feet²/day. Storativity values ranged from 3×10^{-4} to 1.53×10^{-3} with a median value of 8.15×10^{-4} . Hydraulic conductivity values ranged from 40 to 182 feet/day with a median value of 107 feet/day.
- Transmissivity values calculated from well GWP-10 pumping data ranged from 18,770 feet²/day to 77,190 feet²/day with a median value of 34,470 feet²/day. Storativity values ranged from 3.93×10^{-4} to 2.36×10^{-3} with a median value of 1.16×10^{-3} . Hydraulic conductivity values ranged from 42 to 171 feet/day with a median value of 76 feet/day.
- The range of transmissivity and conductivity values calculated from the extraction well and well GWP-10 data are similar, but the median values for well GWP-10 are lower. The median transmissivity values calculated from the extraction well and well GWP-10 analyses are, respectively, 48,015 feet²/day and 34,470 feet²/day. The median hydraulic conductivity values calculated from the extraction well and well GWP-10 analyses are, respectively, 106 feet/day and 76 feet/day. Overall, these results are consistent with a leaky confined aquifer conceptual model.
- The baseline specific capacity data for extraction wells EW-1S, EW-1I, and EW-1D are, respectively, 17 gpm/foot of drawdown, 24 gpm/foot of drawdown, and 24 gpm/foot of drawdown. These values are derived from the sustained yield test. Higher specific capacities were calculated from the step test data. The maximum specific capacity values calculated from step test data for extraction well EW-1S, EW-1I, and EW-1D were, respectively, 24 gpm/ft of drawdown, 31 gpm/ft of drawdown, and 28 gpm/ft of drawdown. The high specific capacity and relatively small drawdown observed in the extraction wells during the sustained yield test indicate that, if necessary, the extraction wells can be pumped at a higher flow rate.

- If municipal wells GWP-10 and GWP-11 continue to pump at the rates and schedules observed during the sustained yield test, then the effect of pumping at these wells should be a constant in the aquifer system and, therefore, they should not impact the extraction well operation.

Section 6

References

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Tables

Table 2-1
Transducer Deployment Information
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well	Transducer Type	Date Installed	Sampling Rate (minutes)	Date Removed
MW-1S	In-Situ	8/4/10	10 (background), 1 (during pump test)	9/20/10
MW-1I	In-Situ	8/4/10	10 (background), 1 (during pump test)	9/20/10
MW-2S	In-Situ	8/4/10	10 (background), 1 (during pump test)	9/20/10
MW-2I	In-Situ	8/4/10	10 (background), 1 (during pump test)	9/20/10
MW-3S	In-Situ	8/4/10	10	9/20/10
MW-3I	In-Situ	8/4/10	10	9/20/10
GWX-10019 (N-10019)	In-Situ	8/4/10	10 (background), 1 (during pump test)	9/20/10
GWX-10020 (N-10020)	In-Situ	8/4/10	10 (background), 1 (during pump test)	9/20/10
SVP-5, Ports 10, 8, 5, 3, and 1	Westbay MOSDAX	8/23/10	10 (background), 1 (during pump test)	9/13/10
SVP-10, Port 10, 8, 5, 3, and 1	Westbay MOSDAX	8/23/10	10 (background), 1 (during pump test)	9/13/10
EW-1S	In-Situ	8/24/10	10 (background), 1 (during pump test)	9/13/10
EW-1I	In-Situ	8/24/10	10 (background), 1 (during pump test)	9/13/10
EW-1D	In-Situ	8/24/10	10 (background), 1 (during pump test)	9/13/10
SVP-2, Port 4	In-Situ	8/24/11	10 (background), 1 (during pump test)	9/13/10
SVP-3, Port 3	In-Situ	8/24/11	10 (background), 1 (during pump test)	9/13/10
SVP-4, Port 6	In-Situ	8/24/11	10 (background), 1 (during pump test)	9/13/10
SVP-9, Port 5	In-Situ	8/24/11	10 (background), 1 (during pump test)	9/13/10
SVP-11, Port 2	In-Situ	8/23/11	10	9/10/11

Table 3-1
Step and Pump Test Flow Rate Information and Specific Capacity Data
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well	Step/Phase	Multiple of Design Flow Rate	Flow Rate (gpm)	Displacement (feet)	Specific Capacity (gpm/ft of drawdown)
EW-1S	1	0.7	40	2.14	19
EW-1S	2	1	60		See note
EW-1S	3	1.3	75	3.26	23
EW-1S	4	1.5	90	3.78	24
EW-1I	1	0.7	40	1.35	30
EW-1I	2	1	60	1.91	31
EW-1I	3	1.3	75	2.4	31
EW-1I	4	1.5	90	2.97	30
EW-1D	1	0.8	60	2.45	24
EW-1D	2	1.3	100	3.9	26
EW-1D	3	1.8	140	5.46	26
EW-1D	4	2.3	180	6.53	28
EW-1S	Pump Test	1.2	70	4.06	17
EW-1I	Pump Test	1.2	70	2.90	24
EW-1D	Pump Test	1.4	110	4.53	24

Note: Experienced recovery during this step, did not calculate specific capacity

Well	Design Flow Rate (gpm)
EW-1S	60
EW-1I	60
EW-1D	80

gpm – gallons per minute

Table 3-2
Water Quality Parameters
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Location	Date and Time	Temperature (degree C)	Specific Conductance (ms/cm)	Dissolved Oxygen (mg/l)	pH (SU)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
Combined Flow (from all 3 extraction wells)	9/7/10 3:00 PM	16.04	0.448	6.66	4.62	226.7	0.46
Combined Flow	9/7/10 3:05 PM	16.01	0.446	5.2	4.58	229.1	0.44
Combined Flow	9/7/10 3:10 PM	16.05	0.448	4.52	4.58	230.4	0.48
EW-1S	9/7/10 3:45 PM	17.55	0.628	6.25	4.53	228.9	0.33
EW-1S	9/7/10 3:50 PM	17.55	0.628	5.2	4.51	233.4	0.44
EW-1S	9/7/10 4:00 PM	17.52	0.626	4.68	4.49	240.5	0.48
EW-1S	9/7/10 4:10 PM	17.42	0.623	4.48	4.89	245.4	0.46
EW-1I	9/7/10 4:35 PM	16.02	0.359	5.13	4.75	216.4	0.55
EW-1I	9/7/10 4:40 PM	16.04	0.358	3.62	4.62	221.8	0.45
EW-1D	9/7/10 5:00 PM	14.65	0.334	4.36	4.21	218.2	0.41
EW-1D	9/7/10 5:05 PM	14.6	0.334	3.54	4.66	222.3	0.73
Combined Flow	9/10/10 8:10 AM	15.55	0.422	9.77	4.8	193.5	0.57
Combined Flow	9/10/10 8:15 AM	15.59	0.421	9.1	4.77	195.4	0.77
Combined Flow	9/10/10 8:20 AM	15.58	0.42	7.3	4.76	195.9	0.56
EW-1S	9/10/10 8:35 AM	16.89	0.55	9.5	4.7	196.9	0.72
EW-1S	9/10/10 8:40 AM	16.86	0.55	8.31	4.66	199.4	0.64
EW-1S	9/10/10 8:45 AM	16.84	0.548	7.65	4.65	201.8	0.59
EW-1S	9/10/10 8:50 AM	16.84	0.548	7.21	4.64	202.5	0.59
EW-1I	9/10/10 9:00 AM	15.68	0.345	4.87	4.78	138.4	0.6
EW-1I	9/10/10 9:05 AM	15.66	0.344	4.47	4.77	193.2	0.77
EW-1I	9/10/10 9:10 AM	15.69	0.344	4.2	4.72	192.7	0.61
EW-1D	9/10/10 9:15 AM	14.4	0.351	5.22	4.78	193.1	0.53
EW-1D	9/10/10 9:20 AM	14.41	0.35	4.51	4.77	194.5	0.81
EW-1D	9/10/10 9:25 AM	14.41	0.351	4.37	4.77	194.6	0.68
EW-1D	9/10/10 9:30 AM	14.42	0.35	4.28	4.78	194.7	0.61

Table 3-3
Manual Water Level Observations
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well ID	Date	Ground Surface Elevation (ft msl) NGVD29	Temporary Stickup (feet above ground surface)	Stickup (feet)	Sanitary Seal Thickness (feet)	DTW (feet below TIC)	Pressure Head (psi)	Height of Water Column Above the Transducer (feet)	DTW (adjusted to ground surface)	Water Level Elevation (feet amsl)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Top of Screen (feet amsl)	Bottom of Screen (feet amsl)
EW-1D	8/30/10 11:23 AM	88.12	0.5	N/A	N/A	35.98	29.59	68.32	35.48	52.64	350	410	-262	-322
EW-1D	9/7/10 9:41 AM	88.12	0.5	n/a	n/a	36.30	29.44	68.00	35.80	52.32	350	410	-262	-322
EW-1I	8/30/10 11:33 AM	88.12	0.25	n/a	n/a	35.15	29.50	68.09	34.90	53.22	280	340	-192	-252
EW-1I	9/7/10 9:47 AM	88.12	0.25	n/a	n/a	35.55	29.36	67.81	35.30	52.82	280	340	-192	-252
EW-1S	8/30/10 11:48 AM	88.12	1.05	n/a	n/a	34.21	27.65	63.82	33.16	54.96	210	270	-122	-182
EW-1S	9/7/10 9:51 AM	88.12	1.05	n/a	n/a	34.67	27.46	63.42	33.62	54.50	210	270	-122	-182
GWX-10019	8/4/10 11:28 AM	86.64	n/a	-0.33	0.04	30.64	17.79	41.07	30.97	55.67	223	228	-136	-141
GWX-10019	8/30/10 11:15 AM	86.64	n/a	-0.33	0.04	30.61	17.68	40.83	30.94	55.70	223	228	-136	-141
GWX-10019	9/7/10 9:31 AM	86.64	n/a	-0.33	0.04	31.05	17.49	40.39	31.38	55.26	223	228	-136	-141
GWX-10019	9/20/10 11:09 AM	86.64	n/a	-0.33	0.04	31.22	15.18	35.04	31.55	55.09	223	228	-136	-141
GWX-10020	8/4/10 11:57 AM	82.78	n/a	0.19	0.04	26.77	19.37	44.74	26.58	56.20	186	191	-103	-108
GWX-10020	8/30/10 10:07 AM	82.78	n/a	0.19	0.04	26.88	19.34	44.66	26.69	56.09	186	191	-103	-108
GWX-10020	9/7/10 8:52 AM	82.78	n/a	0.19	0.04	27.43	19.10	44.12	27.24	55.54	186	191	-103	-108
GWX-10020	9/20/10 11:24 AM	82.78	n/a	0.19	0.04	27.62	16.16	37.32	27.43	55.35	186	191	-103	-108
MW-1I	8/4/10 1:21 PM	86.62	n/a	-0.36	0.04	32.05	16.36	37.76	32.41	54.21	305	315	-218	-228
MW-1I	8/30/10 10:48 AM	86.62	n/a	-0.36	0.04	32.31	16.31	37.65	32.67	53.95	305	315	-218	-228
MW-1I	9/7/10 8:32 AM	86.62	n/a	-0.36	0.04	32.62	16.18	37.36	32.98	53.64	305	315	-218	-228
MW-1I	9/20/10 10:56 AM	86.62	n/a	-0.36	0.04	32.77	16.12	37.23	33.13	53.49	305	315	-218	-228
MW-1S	8/4/10 1:05 PM	86.62	n/a	-0.31	0.04	30.89	16.83	38.86	31.20	55.42	235	245	-148	-158
MW-1S	8/30/10 10:41 AM	86.62	n/a	-0.31	0.04	31.17	16.78	38.74	31.48	55.14	235	245	-148	-158
MW-1S	9/7/10 8:30 AM	86.62	n/a	-0.31	0.04	31.51	16.64	38.42	31.82	54.80	235	245	-148	-158
MW-1S	9/20/10 10:48 AM	86.62	n/a	-0.31	0.04	31.68	16.57	38.25	31.99	54.63	235	245	-148	-158
MW-2I	8/4/10 12:21 PM	87.12	n/a	-0.38	0.04	31.91	16.23	37.47	32.29	54.83	306	316	-219	-229

Table 3-3
Manual Water Level Observations
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well ID	Date	Ground Surface Elevation (ft msl) NGVD29	Temporary Stickup (feet above ground surface)	Stickup (feet)	Sanitary Seal Thickness (feet)	DTW (feet below TIC)	Pressure Head (psi)	Height of Water Column Above the Transducer (feet)	DTW (adjusted to ground surface)	Water Level Elevation (feet amsl)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Top of Screen (feet amsl)	Bottom of Screen (feet amsl)
MW-2I	8/30/10 9:06 AM	87.12	n/a	-0.38	0.04	32.11	16.20	37.41	32.49	54.63	306	316	-219	-229
MW-2I	9/7/10 8:00 AM	87.12	n/a	-0.38	0.04	32.46	16.04	37.04	32.84	54.28	306	316	-219	-229
MW-2I	9/20/10 10:32 AM	87.12	n/a	-0.38	0.04	32.62	15.98	36.9	33.00	54.12	306	316	-219	-229
MW-2S	8/4/10 12:15 PM	87.12	n/a	-0.33	0.04	30.86	16.36	37.78	31.19	55.93	236	246	-149	-159
MW-2S	8/30/10 9:08 AM	87.12	n/a	-0.33	0.04	31.09	16.35	37.74	31.42	55.70	236	246	-149	-159
MW-2S	9/7/10 7:57 AM	87.12	n/a	-0.33	0.04	31.51	16.17	37.34	31.84	55.28	236	246	-149	-159
MW-2S	9/20/10 10:20 AM	87.12	n/a	-0.33	0.04	31.71	16.07	37.12	32.04	55.08	236	246	-149	-159
MW-3I	8/4/10 10:31 AM	85.12	n/a	-0.33	0.04	25.26	17.62	40.70	25.59	59.53	304	314	-219	-229
MW-3I	8/30/10 9:29 AM	85.12	n/a	-0.33	0.04	25.55	17.53	40.49	25.88	59.24	304	314	-219	-229
MW-3I	9/7/10 7:21 AM	85.12	n/a	-0.33	0.04	25.77	17.45	40.29	26.10	59.02	304	314	-219	-229
MW-3I	9/20/10 10:00 AM	85.12	n/a	-0.33	0.04	26.02	17.34	40.04	26.35	58.77	304	314	-219	-229
MW-3S	8/4/10 10:20 AM	85.12	n/a	-0.29	0.04	24.81	15.53	35.87	25.10	60.02	234	244	-149	-159
MW-3S	8/30/10 9:31 AM	85.12	n/a	-0.29	0.04	25.13	15.43	35.64	25.42	59.70	234	244	-149	-159
MW-3S	9/7/10 7:23 AM	85.12	n/a	-0.29	0.04	25.39	15.53	35.39	25.68	59.44	234	244	-149	-159
MW-3S	9/20/10 9:44 AM	85.12	n/a	-0.29	0.04	25.65	15.22	35.16	25.94	59.18	234	244	-149	-159
SVP-2, Port 4	8/30/10 8:39 AM	90.51	0.9	-0.07	n/a	33.68	6.43	14.86	32.78	57.73	330	335	-239	-244
SVP-2, Port 4	9/7/10 9:04 AM	90.51	0.9	-0.07	n/a	34.12	6.24	14.39	33.22	57.29	330	335	-239	-244
SVP-3, Port 3	8/30/10 8:49 AM	88.29	n/a	-0.21	n/a	31.42	8.08	18.65	31.63	56.66	370	375	-282	-287
SVP-3, Port 3	9/7/10 8:21 AM	88.29	n/a	-0.21	n/a	31.35	7.90	18.24	31.56	56.73	370	375	-282	-287
SVP-4, Port 6	8/30/10 8:20 AM	89.97	0.6	-0.36	n/a	33.47	6.27	14.49	32.87	57.10	245	250	-155	-160
SVP-4, Port 6	9/7/10 9:23 AM	89.97	0.6	-0.36	n/a	33.94	6.07	14.02	33.34	56.63	245	250	-155	-160
SVP-5, Port 10	9/7/2010 10:00	86.67	n/a	n/a	n/a	n/a	n/a	n/a	27.35	59.32	45	50	42	37
SVP-5, Port 8	9/7/2010 10:00	86.67	n/a	n/a	n/a	n/a	n/a	n/a	28.56	58.11	150	155	-63	-68

Table 3-3
Manual Water Level Observations
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well ID	Date	Ground Surface Elevation (ft msl) NGVD29	Temporary Stickup (feet above ground surface)	Stickup (feet)	Sanitary Seal Thickness (feet)	DTW (feet below TIC)	Pressure Head (psi)	Height of Water Column Above the Transducer (feet)	DTW (adjusted to ground surface)	Water Level Elevation (feet amsl)	Top of Screen (feet bgs)	Bottom of Screen (feet bgs)	Top of Screen (feet amsl)	Bottom of Screen (feet amsl)
SVP-5, Port 5	9/7/2010 10:00	86.67	n/a	n/a	n/a	n/a	n/a	n/a	31.57	55.1	290	295	-203	-208
SVP-5, Port 3	9/7/2010 10:00	86.67	n/a	n/a	n/a	n/a	n/a	n/a	32.53	54.14	355	360	-268	-273
SVP-5, Port 1	9/7/2010 10:00	86.67	n/a	n/a	n/a	n/a	n/a	n/a	32	54.67	430	435	-343	-348
SVP-9, Port 5	8/30/10 9:53 AM	91.39	n/a	-0.47	n/a	32.51	6.61	15.26	32.98	58.41	285	290	-194	-199
SVP-9, Port 5	9/7/10 9:14 AM	91.39	n/a	-0.47	n/a	32.91	6.44	14.88	33.38	58.01	285	290	-194	-199
SVP-10, Port 10	9/7/2010 10:00	88.95	n/a	n/a	n/a	n/a	n/a	n/a	30.73	58.22	45	50	44	39
SVP-10, Port 8	9/7/2010 10:00	88.95	n/a	n/a	n/a	n/a	n/a	n/a	31.31	57.64	145	150	-56	-61
SVP-10, Port 5	9/7/2010 10:00	88.95	n/a	n/a	n/a	n/a	n/a	n/a	35.33	53.62	285	290	-196	-201
SVP-10, Port 3	9/7/2010 10:00	88.95	n/a	n/a	n/a	n/a	n/a	n/a	35.63	53.32	350	355	-261	-266
SVP-10, Port 1	9/7/2010 10:00	88.95	n/a	n/a	n/a	n/a	n/a	n/a	35.35	53.6	480	485	-391	-396
SVP-11, Port 2	8/30/10 5:35 PM	81.44	n/a	-0.34	n/a	30.48	18.71	43.21	30.82	50.62	400	405	-319	-324

n/a – not applicable

NGVD29 – National Geodetic Vertical Datum of 1929

Stickup – distance from the top of casing up (-) or down (+) to ground surface

amsl – above mean sea level

bgs – below ground surface

DTW – depth to water

msl – mean sea level, psi – pounds per square inch, TIC – top of inside casing

Table 4-1
Well Information and Aquifer Test Analysis Input Parameters
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well	Zone ¹	X	Y	Surface Elevation	Depth to Water	Depth To Water Source ²	Top of Magothy, Elevation	Depth to Top of Magothy	Top of Raritan Clay, Elevation	Depth To Top of Raritan Clay	Aquitard Thickness	Depth to Bottom of Aquitard	Elevation of Bottom of Aquitard	Aquitard Thickness Source ³	b (Thickness of Magothy)	d (Distance from Water Table or Top of Magothy to TOS)	d (Distance from unit top or water table to TOS)	L Screen Length,	Casing Length	Bottom of Screen	Total Well Depth	Elevation of Top of Screen	Elevation of Bottom of Screen	r(c) Inside Radius of Casing	r(w) Radius of Well
		NAD27 feet	NAD27 feet	NGVD29 feet	feet bgs		NGVD29 feet	feet bgs	NGVD29 feet	feet bgs	feet	feet bgs	NGVD29 feet		feet	feet	feet	feet	feet	feet bgs	feet bgs	feet	feet	feet	feet
EW-1S	S	2105932.027	186070.8029	88.12	30	A	1.39	86.73	-476	564	20	122	-34	1	442	88	180	60	210	270	275	-121.88	-181.88	0.33	0.33
EW-1I	I	2105927.568	186080.2383	88.12	30	A	1.41	86.71	-476	564	20	122	-34	1	442	158	250	60	280	340	345	-191.88	-251.88	0.33	0.33
EW-1D	D	2105923.039	186089.3509	88.12	30	A	1.47	86.65	-476	564	20	122	-34	1	442	228	320	60	350	410	415	-261.88	-321.88	0.33	0.33
GWP-10	D	2105573	185553	87.12	30	A	7.41	79.71	-479	566	20	122	-35	3	444	255	347	40	377	417	417	-289.88	-329.88	0.75	0.50
GWP-11	D	2105815.125	185331.8592	85.12	30	A	3.99	81.13	-479	564	20	122	-37	3	442	248	340	40	370	410	410	-284.88	-324.88	0.75	0.50
GWX-10019	S	2105876.582	185981.2593	86.64	30	A	1.77	84.87	-477	564	20	122	-35	1	442	101	193	5	223	228	228	-136.36	-141.36	0.17	0.17
GWX-10020	S	2106480.132	185775.454	82.78	27	A	0	82.78	-478	561	10	108	-25	2	453	78	159	5	186	191	191	-103	-108	0.17	0.17
MW-1S	S	2106106.468	186328.0804	86.62	27	B	6.54	80.08	-476	563	10	108	-21	2	455	127	208	10	235	245	250	-148.38	-158.38	0.17	0.17
MW-1I	I	2106083.149	186321.7465	86.62	27	B	6.48	80.14	-476	563	10	108	-21	2	455	197	278	10	305	315	320	-218.38	-228.38	0.17	0.17
MW-2S	S	2106577.529	186411.4699	87.12	27	B	0	87.12	-475	562	10	93	-6	4	469	143	209	10	236	246	251	-148.88	-158.88	0.17	0.17
MW-2I	I	2106564.064	186423.5908	87.12	27	B	0	87.12	-475	562	10	93	-6	4	469	213	279	10	306	316	321	-218.88	-228.88	0.17	0.17
MW-3S	S	2107725.893	185540.0914	85.12	27	B	4.41	80.71	-492	577	14	n/a	n/a	5	492	153	207	10	234	244	244	-148.88	-158.88	0.17	0.17
MW-3I	I	2107740.054	185546.4829	85.12	27	B	3.88	81.24	-492	577	14	n/a	n/a	5	492	223	277	10	304	314	314	-218.88	-228.88	0.17	0.17
SVP-2, Port 4	I	2106214.482	187385.7233	90.51	27	A	20.71	69.8	-465	556	n/a	n/a	n/a	6	486	260	303	5	330	335	335	-239.49	-244.49	0.08	0.17
SVP-3, Port 3	D	2106542.341	186966.0056	88.29	27	A	0.39	87.9	-474	562	10	93	-5	7	469	277	343	5	370	375	375	-281.71	-286.71	0.08	0.17
SVP-4, Port 6	S	2105820.762	186882.6896	89.97	27	A	18.66	71.31	-473	563	27	121	-31	7	442	124	218	5	245	250	250	-155.03	-160.03	0.08	0.17
SVP-5, Port 10	U	2106243.192	186039.5723	86.67	27	B	0	86.67	-476	563	10	108	-21	2	455	18	18	5	45	50	50	41.67	36.67	0.08	0.17
SVP-5, Port 8	S	2106243.192	186039.5723	86.67	27	B	0	86.67	-476	563	10	108	-21	2	455	42	123	5	150	155	150	-63.33	-68.33	0.08	0.17
SVP-5, Port 5	I	2106243.192	186039.5723	86.67	27	B	0	86.67	-476	563	10	108	-21	2	455	182	263	5	290	295	290	-203.33	-208.33	0.08	0.17
SVP-5, Port 3	D	2106243.192	186039.5723	86.67	27	B	0	86.67	-476	563	10	108	-21	2	455	247	328	5	355	360	360	-268.33	-273.33	0.08	0.17
SVP-5, Port 1	D	2106243.192	186039.5723	86.67	27	B	0	86.67	-476	563	10	108	-21	2	455	322	403	5	430	435	435	-343.33	-348.33	0.08	0.17
SVP-9, Port 5	I	2105956.767	187687.257	91.39	27	A	20.41	70.98	-460	551	10	119	-28	7	432	166	258	5	285	290	290	-193.61	-198.61	0.08	0.17
SVP-10, Port 10	U	2105899.137	186072.6754	88.95	30	A	1.67	87.28	-476	565	20	122	-33	1	443	15	15	5	45	50	50	43.95	38.95	0.08	0.17
SVP-10, Port 8	S	2105899.137	186072.6754	88.95	30	A	1.67	87.28	-476	565	20	122	-33	1	443	23	115	5	145	150	150	-56.05	-61.05	0.08	0.17
SVP-10, Port 5	I	2105899.137	186072.6754	88.95	30	A	1.67	87.28	-476	565	20	122	-33	1	443	163	255	5	285	290	290	-196.05	-201.05	0.08	0.17
SVP-10, Port 3	D	2105899.137	186072.6754	88.95	30	A	1.67	87.28	-476	565	20	122	-33	1	443	228	320	5	350	355	355	-261.05	-266.05	0.08	0.17
SVP-10, Port 1	D	2105899.137	186072.6754	88.95	30	A	1.67	87.28	-476	565	20	122	-33	1	443	358	450	5	480	485	485	-391.05	-396.05	0.08	0.17
SVP-11, Port 2	D	2105597.034	184603.9355	81.44	30	A	3.45	77.99	-485	566	33	177	-96	7	389	223	370	5	400	405	405	-318.56	-323.56	0.08	0.17
														Mean	452										

Note:
1. U- upper, S = shallow, I = intermediate, D = deep
2. All water level data collected in September 2010. A = SVP-10, Port 10; B = SVP-5, Port 10
3. Aquitard Thickness Data Sources: 1: Aquitard thickness data from TB-1 boring log, 2: Aquitard thickness data from SVP-5 gamma log, 3: Aquitard thickness data from TB-1 boring log, 4:SVP-03 gamma log, 5: No data available, assumed value of 14 feet
6: No aquitard observed in data, 7:Gamma log
bgs – below ground surface
NAD27 – North American Datum of 1927; NGVD29 – National Geodetic Vertical Datum of 1929
n/a - not applicable

Table 4-2
Model Layer and Aquifer Test Well Screen Information
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Well	Zone ¹	Surface Elevation	Top of Screen	Bottom of Screen	Elevation of Top of Screen	Elevation of Bottom of Screen	Model Layer Screened By Well	Elevation of Top of Model Layer	Model Layer Screened By Well	Elevation of Top of Model Layer	Model Layer Screened By Well	Elevation of Top of Model Layer	Elevation of Bottom of Deepest Model Layer Screened by Well	Model Layer Description
		NGVD29 feet	feet bgs	feet bgs	feet	feet		NGVD29 feet		NGVD29 feet		NGVD29 feet	NGVD29 feet	
EW-1S	S	88.12	210	270	-121.88	-181.88	11	-101	10	-145			-189	Middle Magothy
EW-1I	I	88.12	280	340	-191.88	-251.88	9	-189	8	-215	7	-241	-268	Middle Magothy
EW-1D	D	88.12	350	410	-261.88	-321.88	7	-241	6	-268	5	-294	-333	Middle Magothy
GWP-10	D	87.12	377	417	-289.88	-329.88	6	-269	5	-295			-335	Middle Magothy
GWP-11	D	85.12	370	410	-284.88	-324.88	6	-270	5	-296			-336	Middle Magothy
GWX-10019	S	86.64	223	228	-136.36	-141.36	11	-101					-145	Middle Magothy
GWX-10020	S	82.78	186	191	-103	-108	11	-101					-146	Middle Magothy
MW-1S	S	86.62	235	245	-148.38	-158.38	10	-144					-188	Middle Magothy
MW-1I	I	86.62	305	315	-218.38	-228.38	8	-214					-241	Middle Magothy
MW-2S	S	87.12	236	246	-148.88	-158.88	10	-145					-189	Middle Magothy
MW-2I	I	87.12	306	316	-218.88	-228.88	8	-215					-242	Middle Magothy
MW-3S	S	85.12	234	244	-148.88	-158.88	10	-147					-194	Middle Magothy
MW-3I	I	85.12	304	314	-218.88	-228.88	9	-194	8	-220			-247	Middle Magothy
SVP-2, Port 4	I	90.51	330	335	-239.49	-244.49	7	-237					-264	Middle Magothy
SVP-3, Port 3	D	88.29	370	375	-281.71	-286.71	6	-266					-292	Middle Magothy
SVP-4, Port 6	S	89.97	245	250	-155.03	-160.03	10	-142					-184	Middle Magothy
SVP-5, Port 10	U	86.67	45	50	41.67	36.67	14	86.67					13	Upper Glacial
SVP-5, Port 8	S	86.67	150	155	-63.33	-68.33	12	0					-101	Upper Magothy
SVP-5, Port 5	I	86.67	290	295	-203.33	-208.33	9	-190					-216	Middle Magothy
SVP-5, Port 3	D	86.67	355	360	-268.33	-273.33	6	-268					-295	Middle Magothy
SVP-5, Port 1	D	86.67	430	435	-343.33	-348.33	4	-334					-373	Middle Magothy
SVP-9, Port 5	I	91.39	285	290	-193.61	-198.61	9	-181					-208	Middle Magothy
SVP-10, Port 10	U	88.95	45	50	43.95	38.95	14	88.95					25	Upper Glacial
SVP-10, Port 8	S	88.95	145	150	-56.05	-61.05	12	1.7					-100	Upper Magothy
SVP-10, Port 5	I	88.95	285	290	-196.05	-201.05	9	-188					-215	Middle Magothy
SVP-10, Port 3	D	88.95	350	355	-261.05	-266.05	7	-241					-268	Middle Magothy
SVP-10, Port 1	D	88.95	480	485	-391.05	-396.05	3	-373					-476	Basal Magothy
SVP-11, Port 2	D	81.44	400	405	-318.56	-323.56	5	-297					-338	Middle Magothy

1. U – upper, S = shallow, I = intermediate, D = deep
2. Shading indicates the well did not penetrate model layer.

Table 4-3
Aquifer Test Analysis Results
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Observation Well	Zone (1)	Model Layer (2)	Pumping Well	Transmissivity, T [feet ² /day]	Storativity, S	Hydraulic Conductivity, K (feet/day)	Model	Method	Pumping Well	T [ft ² /day]	Storativity, S	K (ft/day)	Method	Aquifer Property Code	Model Horizontal K (Vertical K) Values (5)	Model Storativity, S (Specific Yield, S _y)
EW-1S	S	11, 10	EW-1S, step test	27,160	5.58E-04	60	Leaky Confined (LC)	Hantush-Jacob (HJ)						348	40 (0.7)	2E-06 (0.15)
EW-1I	I	9, 8, 7	EW-1I, step test	57,850	1.61E-02	128	LC	HJ						350	80 (2)	2E-06 (0.15)
EW-1D	D	7, 6, 5	EW-1D, step test	38,580	2.46E-01	85	LC	HJ						350	80 (2)	2E-06 (0.15)
GWP-10 & Multiple Wells (3) Distance Drawdown									GWP-10	38,860	6.59E-04	86	HJ	Not Applicable		
Multiple Wells*			EW-1S, I, D and GWP-10						GWP-10	32,610	1.30E-03	72	HJ	Not Applicable		
GWX-10019	S	11	EW-1S, I, D and GWP-10	48,660	6.81E-04	108	LC	HJ	GWP-10	29,680	9.77E-04	66	HJ	348	40 (0.7)	2E-06 (0.15)
GWX-10020	S	11	EW-1S, I, D and GWP-10	74,640	7.25E-04	165	LC	HJ	GWP-10	36,880	1.14E-03	82	HJ	348	40 (0.7)	2E-06 (0.15)
MW-1S	S	10	EW-1S, I, D and GWP-10	60,510	3.00E-04	134	LC	HJ	GWP-10	34,470	7.68E-04	76	HJ	348	40 (0.7)	2E-06 (0.15)
MW-2S	S	10	EW-1S, I, D and GWP-10	46,310	1.02E-03	102	Unconfined (U)	Neuman	GWP-10	18,770	1.63E-03	42	Neuman	348	40 (0.7)	2E-06 (0.15)
MW-3S	S	10	EW-1S, I, D and GWP-10	20,500	4.11E-04	45	U	Neuman	GWP-10	(4)				348	40 (0.7)	2E-06 (0.15)
SVP-4, Port 6	S	10	EW-1S, I, D and GWP-10	18,130	8.57E-04	40	U	Neuman	GWP-10	20,600	1.06E-03	46	Neuman	348	40 (0.7)	2E-06 (0.15)
SVP-10, Port 8	S	12	EW-1S, I, D and GWP-10	20,360	3.18E-04	45	U	Neuman	GWP-10	77,190	2.34E-03	171	HJ	349	60 (0.6)	2E-06 (0.15)
EW-1I	I	9, 8, 7	EW-1S, I, D and GWP-10						GWP-10	28,560	9.50E-04	63		350	80 (2)	2E-06 (0.15)
MW-1I	I	8	EW-1S, I, D and GWP-10	48,180	7.95E-04	107	LC	HJ	GWP-10	33,270	1.34E-03	74	HJ	350	80 (2)	2E-06 (0.15)
MW-2I	I	8	EW-1S, I, D and GWP-10	50,280	1.02E-03	111	LC	HJ	GWP-10	41,220	1.16E-03	91	HJ	350	80 (2)	2E-06 (0.15)
MW-3I	I	9, 8	EW-1S, I, D and GWP-10	47,850	9.83E-04	106	LC	HJ	GWP-10	(4)				348	40 (0.7)	2E-06 (0.15)
SVP-10, Port 5	I	9	EW-1S, I, D and GWP-10	42,170	3.00E-04	93	LC	HJ	GWP-10	27,560	3.93E-04	61	HJ	350	80 (2)	2E-06 (0.15)
SVP-2, Port 4	I	7	EW-1S, I, D and GWP-10	66,800	1.53E-03	148	LC	HJ	GWP-10	37,880	1.33E-03	84	HJ	350	80 (2)	2E-06 (0.15)
SVP-9, Port 5	I	9	EW-1S, I, D and GWP-10	82,430	1.42E-03	182	LC	HJ	GWP-10	38,140	9.57E-04	84	HJ	350	80 (2)	2E-06 (0.15)
EW-1D	D	7, 6, 5	EW-1S, I, D and GWP-10						GWP-10	37,360	2.36E-03	83	HJ	350	80 (2)	2E-06 (0.15)
SVP-3, Port 3	D	6	EW-1S, I, D and GWP-10	55,430	1.38E-03	123	LC	HJ	GWP-10	38,810	1.37E-03	86	HJ	350	80 (2)	2E-06 (0.15)
SVP-10, Port 3	D	7	EW-1S, I, D and GWP-10	49,260	1.32E-03	109	LC	HJ	GWP-10	37,020	2.16E-03	82	HJ	350	80 (2)	2E-06 (0.15)
SVP-10, Port 1	D	3	EW-1S, I, D and GWP-10	41,330	8.35E-04	91	LC	HJ	GWP-10	28,180	1.85E-03	62	HJ	332	80 (1.2)	2E-06 (0.15)
SVP-11, Port 2	D	5	EW-1S, I, D and GWP-10	36,000	4.34E-04	80	LC	HJ	GWP-10	22,800	8.82E-04	50	HJ	350	80 (2)	2E-06 (0.15)
SVP-5, Port 8		12	EW-1S, I, D and GWP-10	(4)						(4)				349	60 (0.6)	2E-06 (0.15)
SVP-5, Port 5		9	EW-1S, I, D and GWP-10	(4)						(4)				350	80 (2)	2E-06 (0.15)
SVP-5, Port 3		6	EW-1S, I, D and GWP-10	(4)						(4)				350	80 (2)	2E-06 (0.15)
SVP-5, Port 1		4	EW-1S, I, D and GWP-10	(4)						(4)				348	40 (0.7)	2E-06 (0.15)
	Minimum			18,130	3.00E-04	40				18,770	3.93E-04	42			40	
	Maximum			82,430	1.53E-03	182				77,190	2.36E-03	171			80	
	Median			48,180	8.15E-04	107				34,470	1.16E-03	76				

(1) Shallow (S), Intermediate (I), Deep (D),
(2) Model layers in depth order from shallow to deep
(3) Multiple Wells: EW-1S, EW-1I, EW-1D, GWX-10019, GWX-10020, MW-1S, MW-1I, MW-2I, SVP-3-Port 3, SVP-4, Port 6, SVP-10-Port 1, SVP-10-Port 3, SVP-10-Port 5, SVP-11-Port 2
(4) Data not available during observation period
(5) K values checked in model elements within 100 feet of well

Table 4-4
Distance Drawdown Data for Extraction Well and Well GWP-10 Pumping
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Shallow Zone			
Time (1) (min)	Well	Radial Distance (ft) from EW cluster	Displacement (ft)
4320	GWX-10019	111	0.78
4320	MW-1S	306	0.53
4320	MW-2S	729	0.27
4320	SVP-4, Port 6	810	0.26
Intermediate Zone			
Time (min)	Well	Radial Distance (ft) from EW cluster	Displacement (ft)
4320	SVP-10, Port 5	91	1.37
4320	MW-1I	287	0.61
4320	SVP-5, Port 5	318	0.55
4320	MW-2I	723	0.34
4320	SVP-2, Port 4	1336	0.13
4320	SVP-9, Port 5	1600	0.08
Deep Zone			
Time (min)	Well	Radial Distance (ft) from EW cluster	Displacement (ft)
4320	SVP-10, Port 3	91	1.36
4320	SVP-5, Port 3	318	0.64
4320	SVP-3, Port 3	1080	0.19

(1) Time since start of extraction well pumping

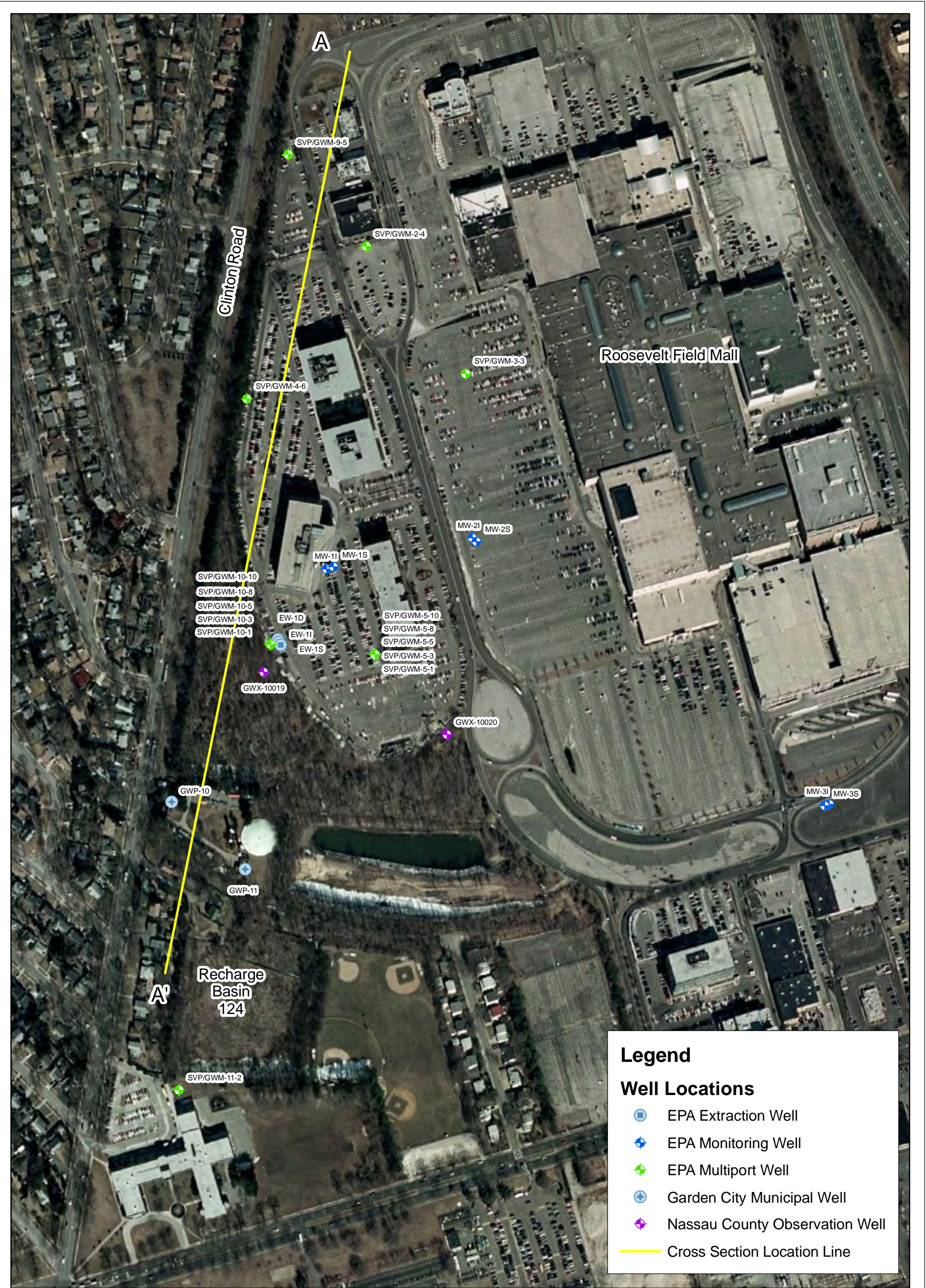
Table 4-5
Comparison of Aquifer Test Analysis Results and Model Layer K Values
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

Observation Well	Model Layer	Aquifer Unit	K (feet/day) Step Test and EW's and GWP-10 Pumping	K (feet/day) GWP-10 Pumping	Original Model Horizontal K (Vertical K)	Revised Model Horizontal K (Vertical K)
SVP-10, Port 8	12	Upper Magothy	45	171	35 (0.6)	60 (0.6)
EW-1S	11, 10	Middle Magothy	60		40 (0.7)	40 (0.7)
GWX-10019	11	Middle Magothy	108	66	40 (0.7)	40 (0.7)
GWX-10020	11	Middle Magothy	165	82	40 (0.7)	40 (0.7)
MW-1S	10	Middle Magothy	134	76	40 (0.7)	40 (0.7)
MW-2S	10	Middle Magothy	102	42	40 (0.7)	40 (0.7)
MW-3S	10	Middle Magothy	45		40 (0.7)	40 (0.7)
SVP-4, Port 6	10	Middle Magothy	40	46	40 (0.7)	40 (0.7)
EW-1I	9, 8, 7	Middle Magothy, Coarse Zone	128	63	n/a	80 (2)
MW-3I	9, 8	Middle Magothy	106		40 (0.7)	40 (0.7)
SVP-10, Port 5	9	Middle Magothy, Coarse Zone	93	61	n/a	80 (2)
SVP-9, Port 5	9	Middle Magothy, Coarse Zone	182	84	n/a	80 (2)
MW-1I	8	Middle Magothy, Coarse Zone	107	74	n/a	80 (2)
MW-2I	8	Middle Magothy, Coarse Zone	111	91	n/a	80 (2)
EW-1D	7, 6, 5	Middle Magothy, Coarse Zone	85	83	n/a	80 (2)
SVP-2, Port 4	7	Middle Magothy, Coarse Zone	148	84	n/a	80 (2)
SVP-10, Port 3	7	Middle Magothy, Coarse Zone	109	82	n/a	80 (2)
SVP-3, Port 3	6	Middle Magothy, Coarse Zone	123	86	n/a	80 (2)
SVP-11, Port 2	5	Middle Magothy, Coarse Zone	80	50	n/a	80 (2)
SVP-10, Port 1	3	Basal Magothy	91	62	60 (1.2)	80 (1.2)

Blank cell: data not available or usable for analysis.

n/a – not applicable, Middle Magothy, coarse zone was added to the model based on aquifer test results

Figures



300 150 0 300 Feet



Figure 2-1
Sustained Yield Test
Monitoring and Pumping Well Location Map
Old Roosevelt Field Contaminated Groundwater Area
Superfund Site
Garden City, New York
CDM

Figure 2-2
Geologic and Groundwater Flow Model Cross Section
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

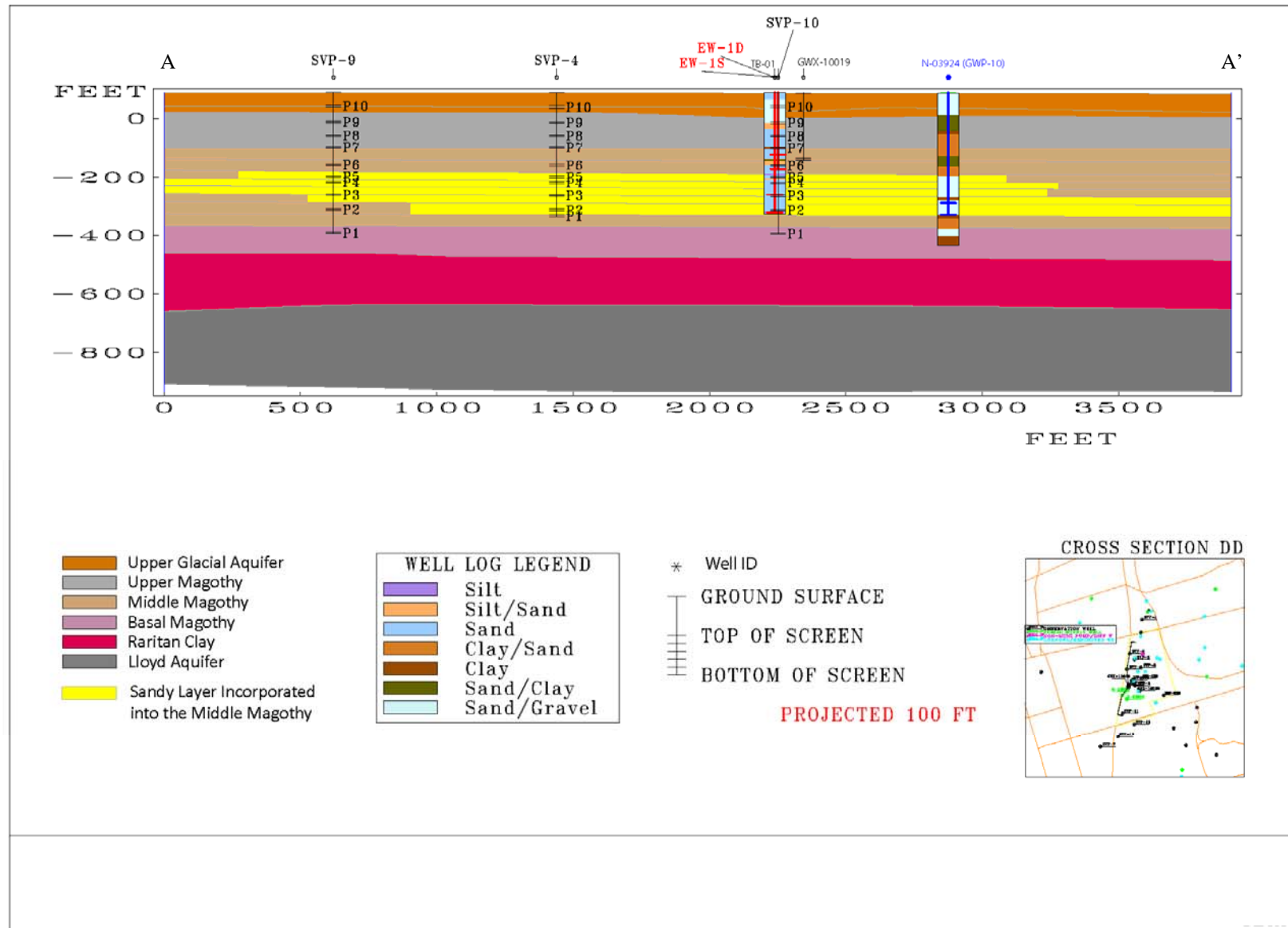


Figure 4-1
Well SVP-10 Water Level Data
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

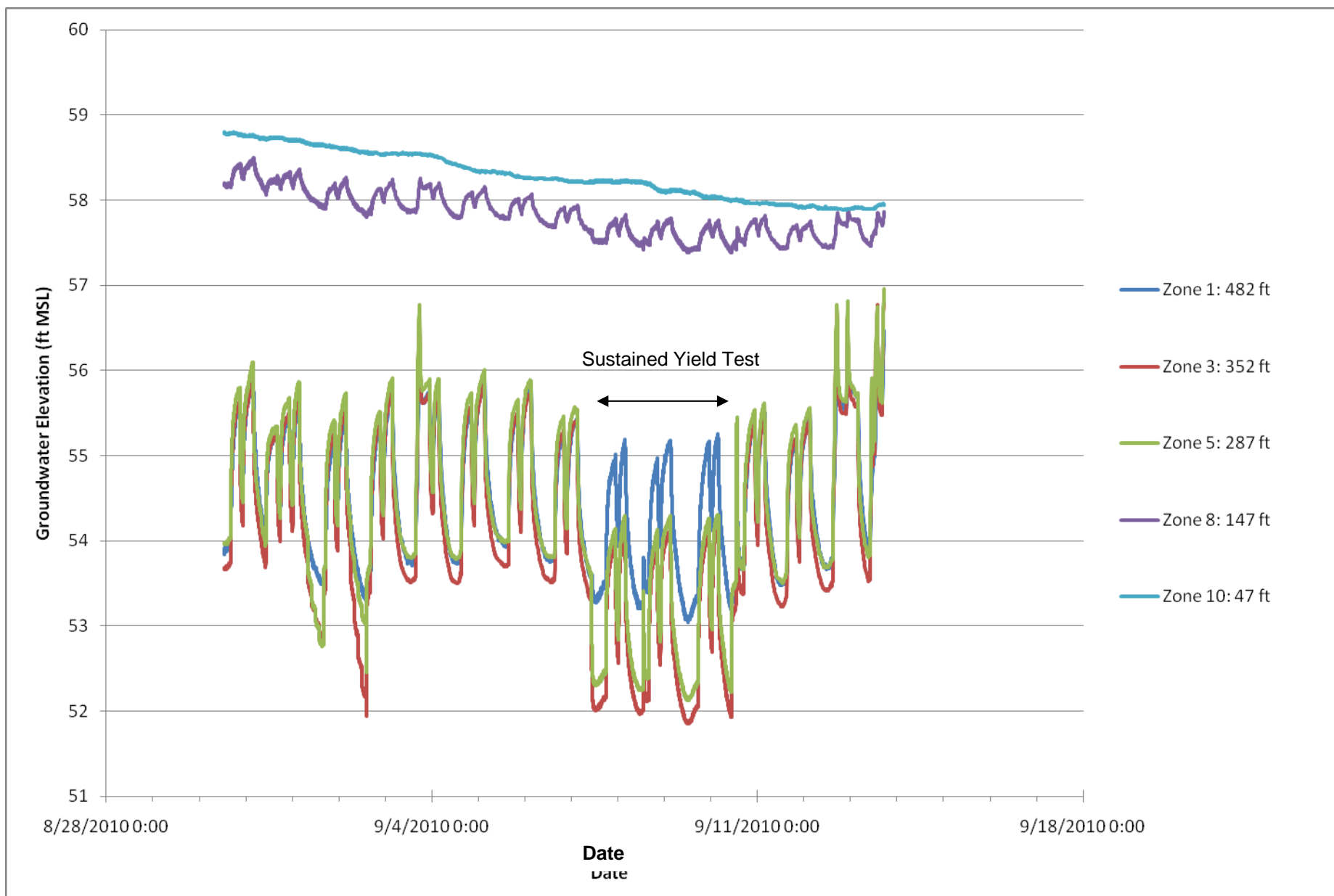


Figure 4-2
Well EW-1I Step Test Water Level Data
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

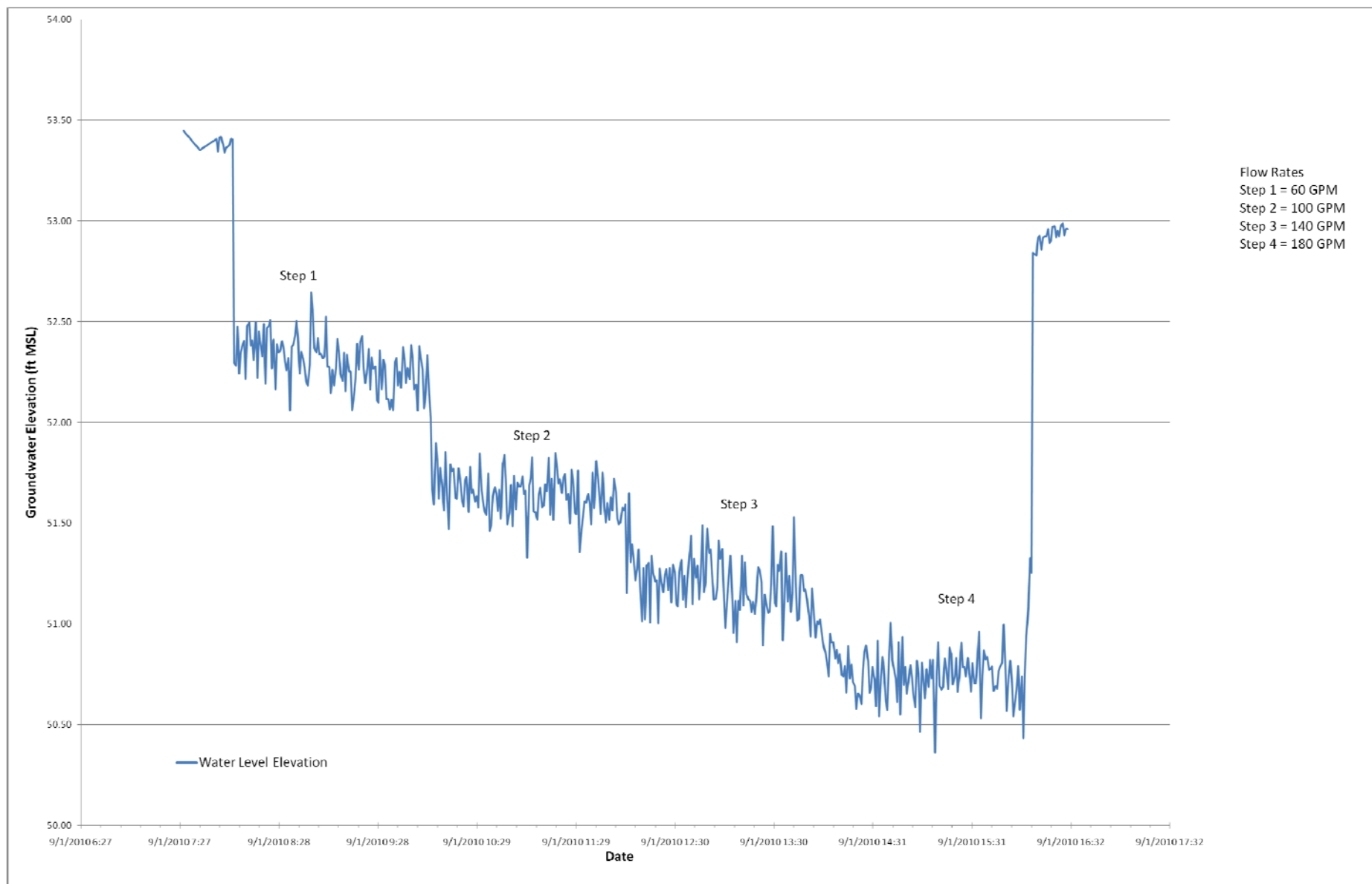
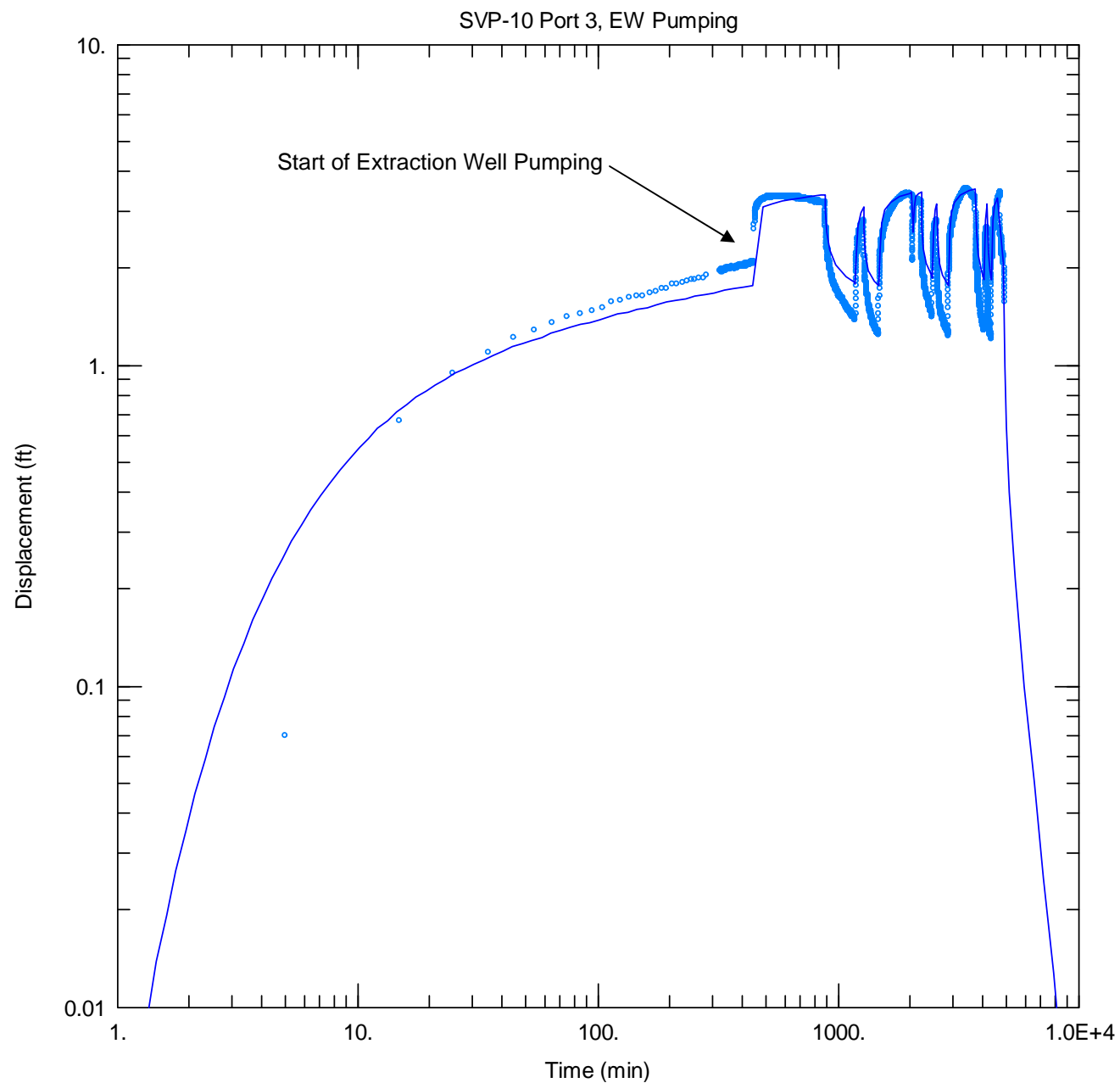


Figure 4-3
Well SVP-10, Port 3 Data Analysis: Extraction Well Pumping
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York



Obs. Wells

• SVP-10-3

Aquifer Model

Leaky

Solution

Hantush-Jacob

Parameters

$T = 4.926E+4 \text{ ft}^2/\text{day}$

$S = 0.001319$

$r/B = 0.1$

$Kz/Kr = 0.01$

$b = 452. \text{ ft}$

Figure 4-4
Distance Drawdown Graph: Extraction Well Pumping
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York

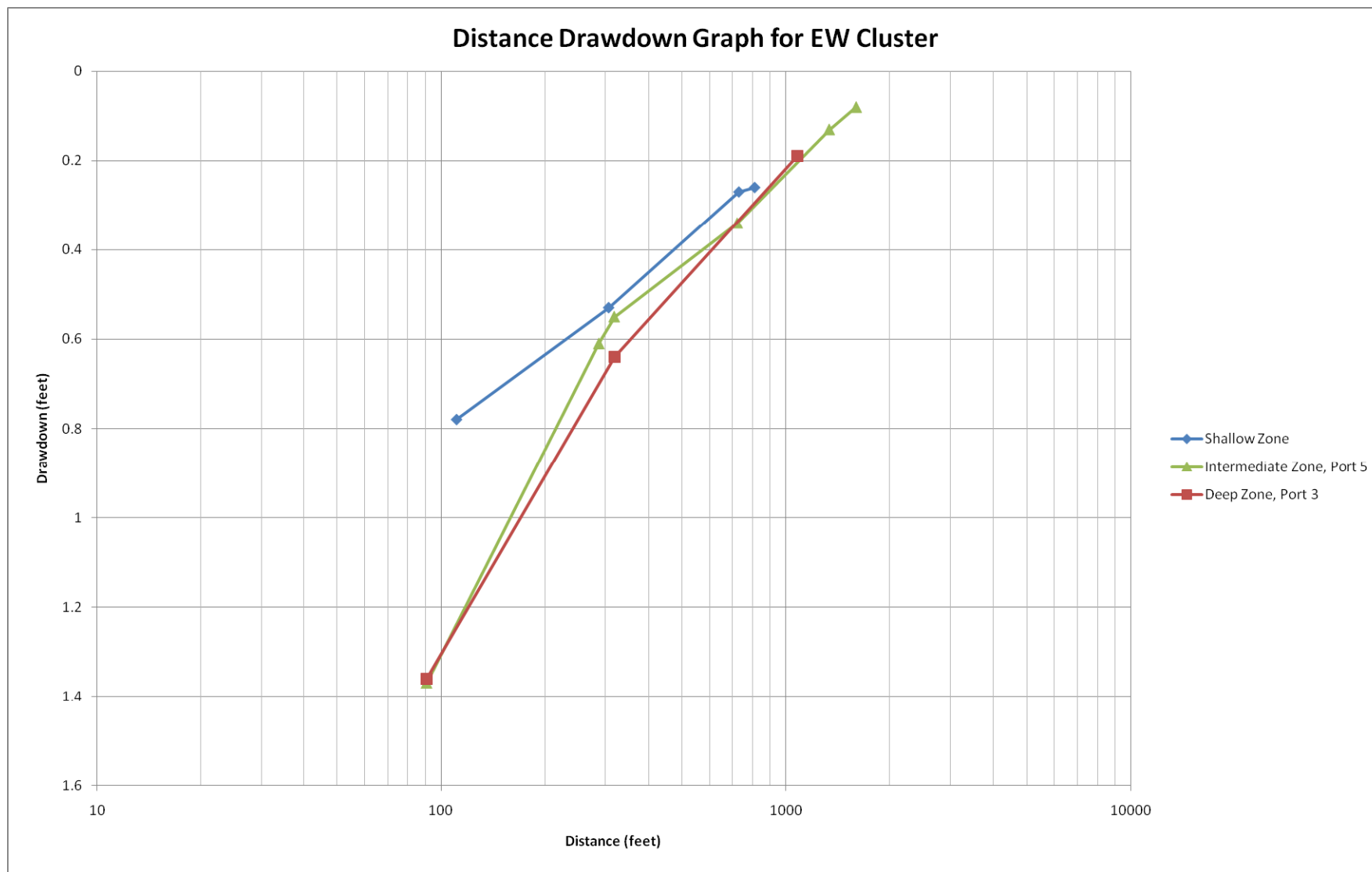
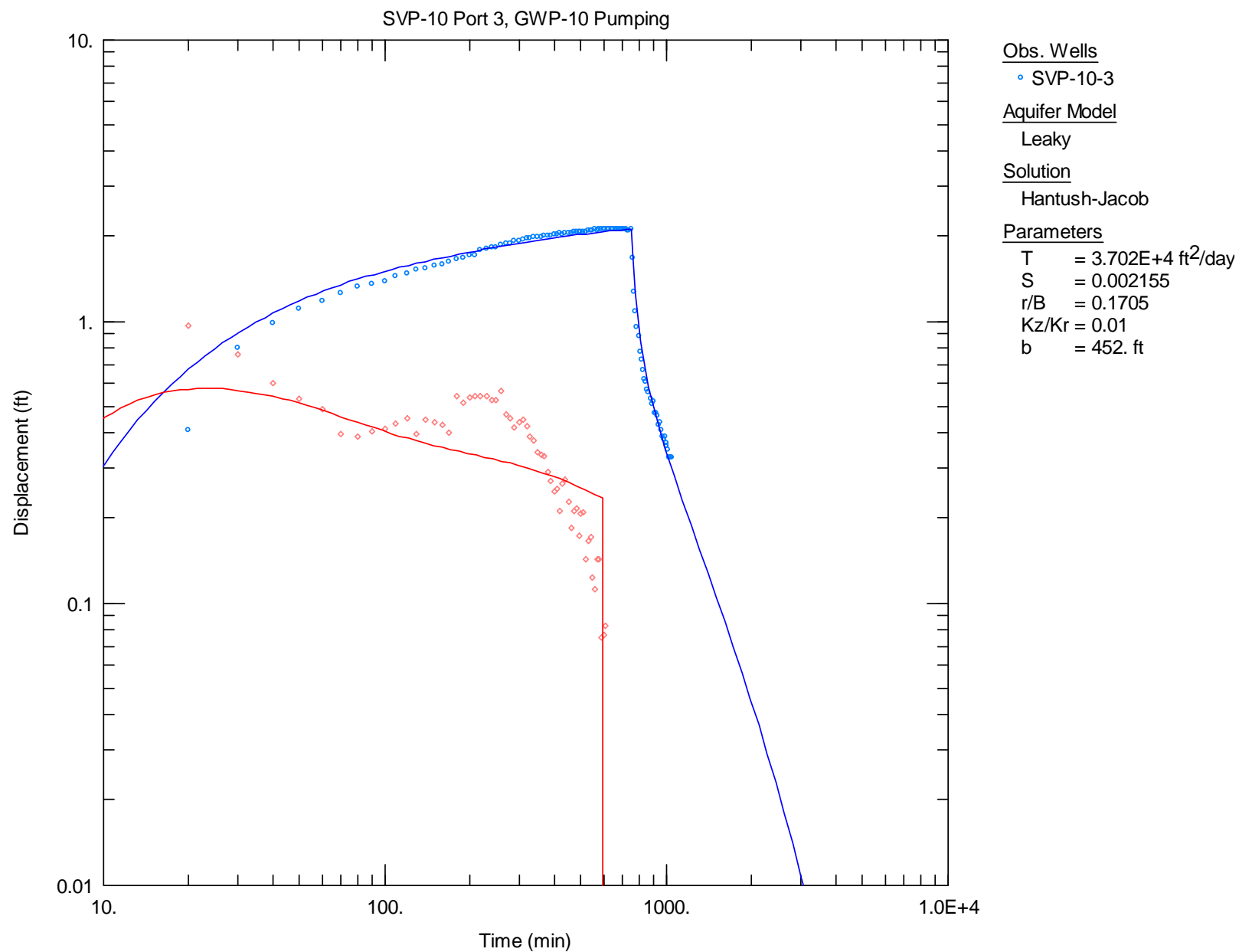


Figure 4-5
Well SVP-10, Port 3 Data Analysis: Well GWP-10 Pumping
Old Roosevelt Field Contaminated Groundwater Area Superfund Site
Garden City, New York



Appendix A

**SVP-05 and SVP-10 Transducer Deployment
Information**



MOSDAX Probe String

Installation Field Record

Well No: SUP-5

By: GS

Location: Rosevelt Field

Date: 8/23/10

Installation Data

[illegible]

Datalogging Settings

Schedule		MAGI Settings	
Scan Rate:		Power Save:	
Collect Rate:		Beeper:	
Start Time:		External Power:	

Casing Installation Log Aquifer Drilling & Testing, Inc.

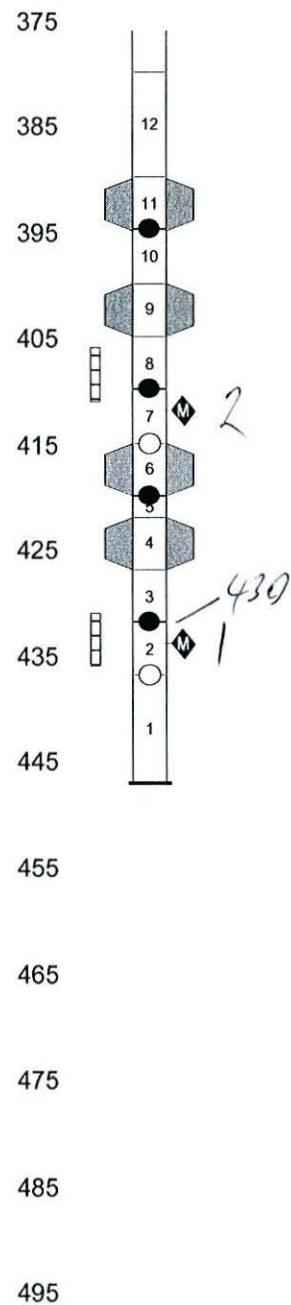
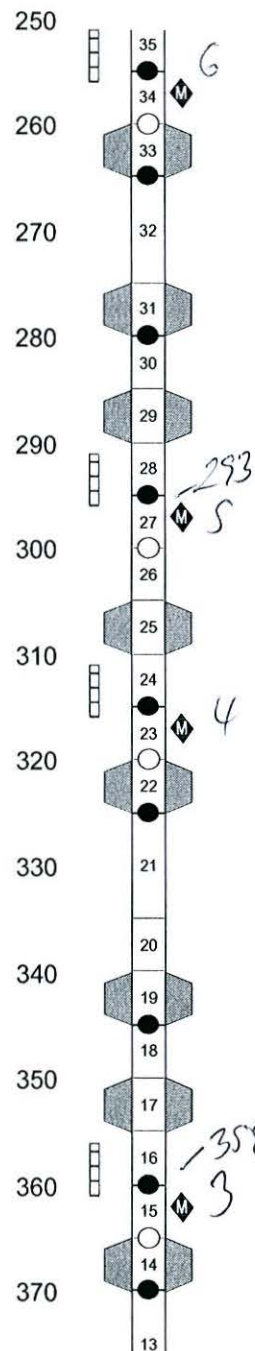
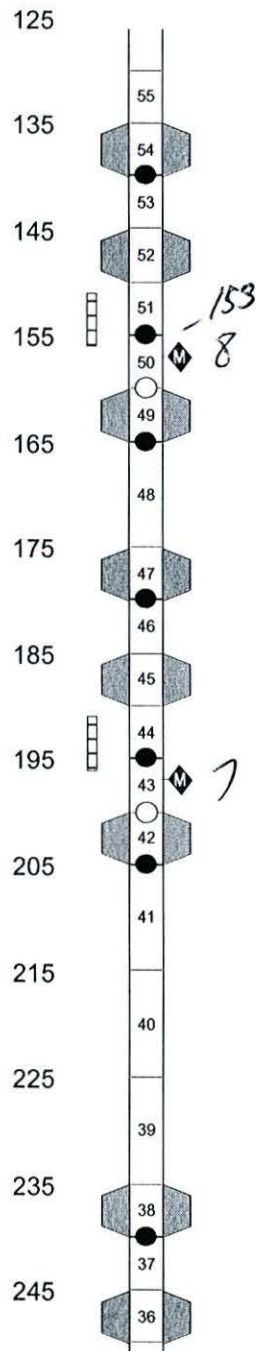
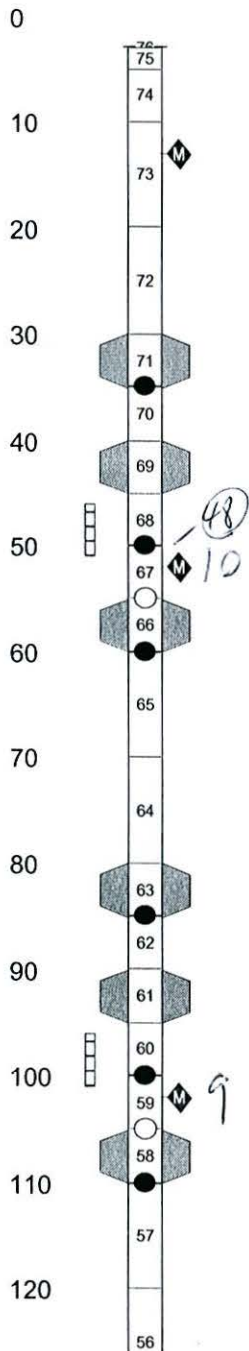
Job No: WB845
Well: SVP--05

Scale WellMP
Feet Casingg

Scale WellMP
Feet Casingg

Scale WellMP
Feet Casingg

Scale WellMP
Feet Casingg



**Fabrication of MOSDAX 2518 Probe Cables
Assembly Record and Acceptance Tests**

Page 1 of 1

Client: CDM

Borehole No.: SVP-5

No. of Probes: 5

Depth: 446 ft

Project No.: WB845

Port No.	Nom. Port Depth (ft)	Cable ID No.	Nominal Length (ft)	Cable Type	Top Assembly			Bottom Assembly			Continuity Tests			Final Length (ft)	Final Accept
					# Strands	Adhesive	Connector	# Strands	Adhesive	Connector	A = Center	B = Armor	A to B		
		0-10	68.00												
10	48														
		10-8	105.00												
8	153														
		8-5	140.00												
5	293														
		5-3	65.00												
3	358														
		3-1	72.00												
1	430														
			(430.00)												
			-												
			-												
			-												

**Fabrication of MOSDAX 2518 Probe Cables
Assembly Record and Acceptance Tests**

Page 1 of 1

Client: CDM

Borehole No.: SVP-10

No. of Probes: 5

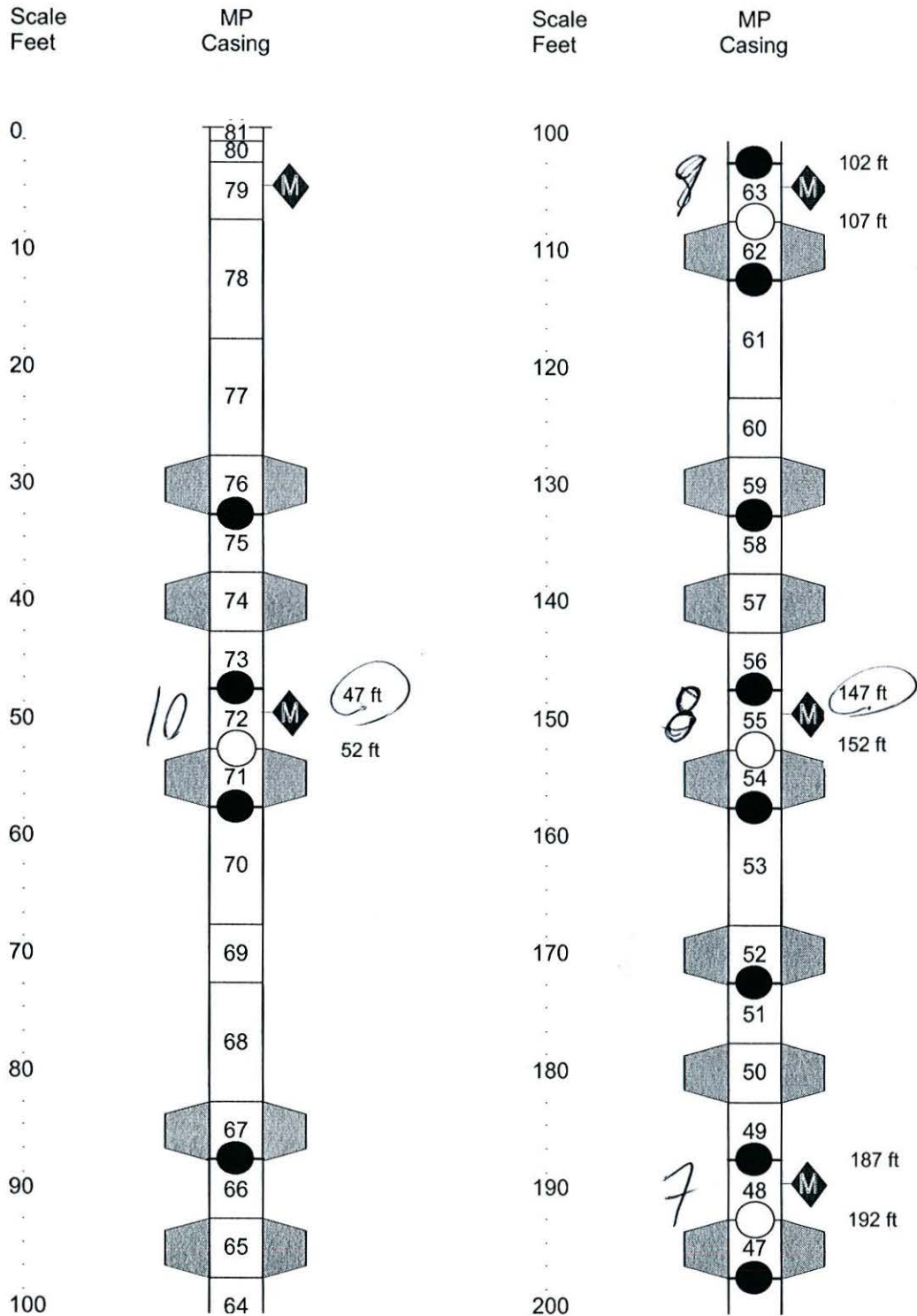
Depth: 497 ft

Project No.: WB845

Port No.	Nom. Port Depth (ft)	Cable ID No.	Nominal Length (ft)	Cable Type	Top Assembly			Bottom Assembly			Continuity Tests			Final Length (ft)	Final Accept
					# Strands	Adhesive	Connector	# Strands	Adhesive	Connector	A = Center	B = Armor	A to B		
		0-10	67.00												
10	47														
		10-8	100.00												
8	147														
		8-5	140.00												
5	287														
		5-3	65.00												
3	352														
		3-1	130.00												
1	482														
			(482.00)												
			-												
			-												
			-												

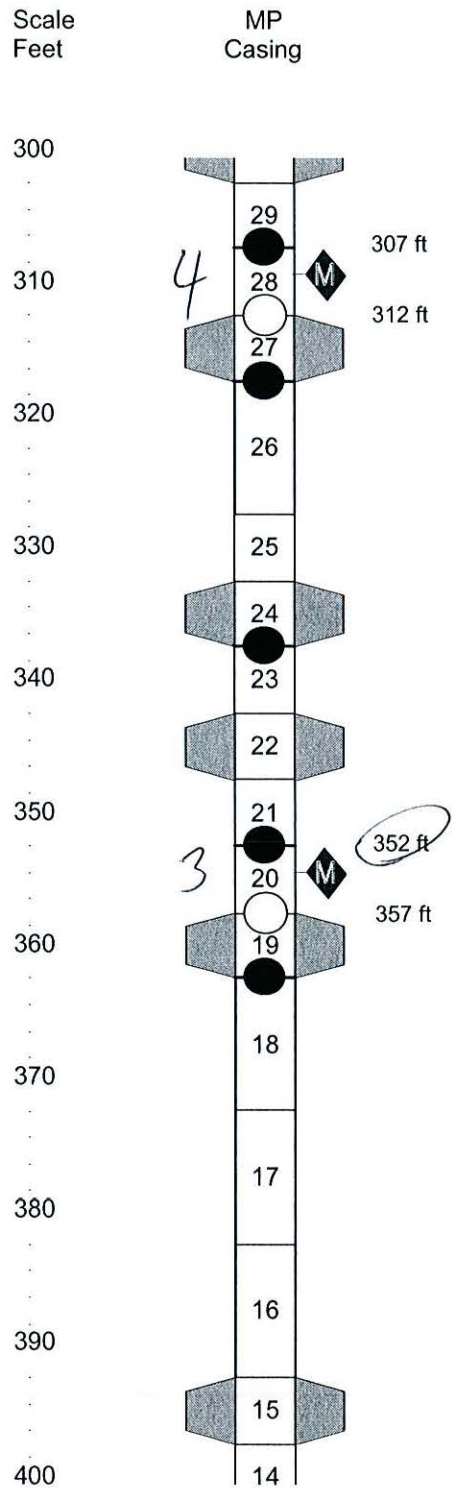
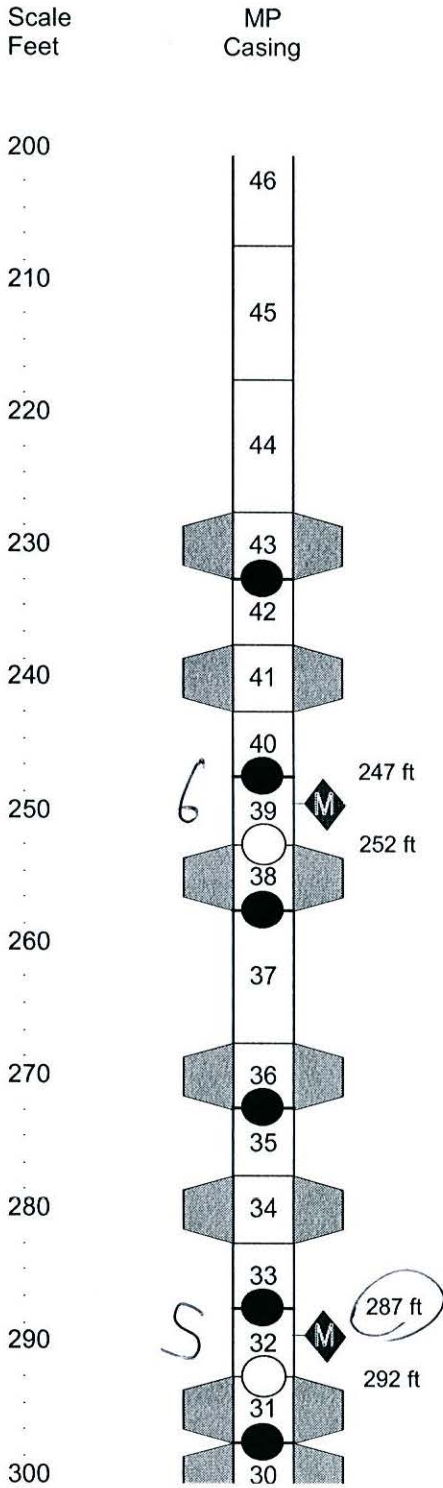
Summary Casing Log CDM

Job No: WB845
Well: SVP--10



Summary Casing Log CDM

Job No: WB845
Well: SVP--10



Summary Casing Log CDM

Job No: WB845
Well: SVP--10

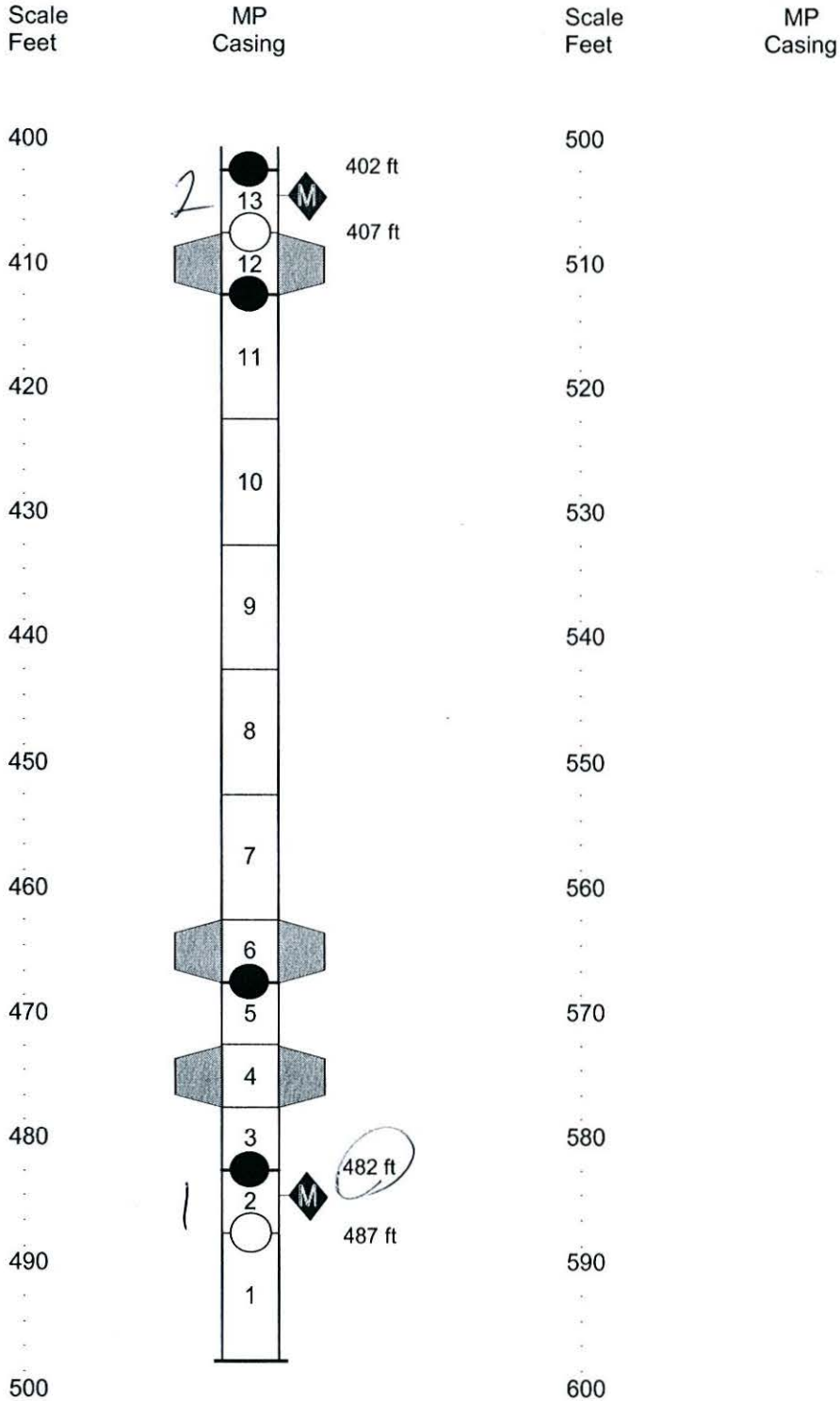


Table 3b, Depths of Key Items for Westbay monitoring well: SVP-10.

Zone No.	Screen Interval* (From video log)	Packer No.	Packer Serial No.	Nominal Packer Position***	Magnetic Collar Depth	Measurement Port Depth**	Pumping Port Depth**	Port Name
Zone 1	480-485	1	16336	472	484	482	487	Zone 1
QA 1		2	16337	462		467		QA 1
QA 2		3	16235	407		412		QA 2
Zone 2	400-405	4	16224	392	404	402	407	Zone 2
QA 3		5	16233	357		362		QA 3
Zone 3	350-355	6	16232	342	354	352	357	Zone 3
QA 4		7	16231	332		337		QA 4
QA 5		8	16250	312		317		QA 5
Zone 4	305-310	9	16248	297	309	307	312	Zone 4
QA 6		10	16249	292		297		QA 6
Zone 5	285-290	11	16247	277	389	287	292	Zone 5
QA 7		12	16246	267		272		QA 7
QA 8		13	16255	252		257		QA 8
Zone 6	245-250	14	16254	237	249	247	252	Zone 6
QA 9		15	16253	227		232		QA 9
QA 10		16	16252	192		197		QA 10
Zone 7	185-190	17	16251	177	189	187	192	Zone 7
QA 11		18	16236	167		172		QA 11
QA 12		19	16237	152		157		QA 12
Zone 8	145-150	20	16238	137	149	147	152	Zone 8
QA 13		21	16245	127		132		QA 13
QA 14		22	16239	107		112		QA 14
Zone 9	100-115	23	16240	92	104	102	107	Zone 9
QA 15		24	16244	82		87		QA 15
QA 16		25	16243	52		57		QA 16
Zone 10	45-50	26	16242	37	49	47	52	Zone 10
QA 17		27	16241	27		32		QA 17

* Depths are with respect to ground level.

** Component positions are referenced to the top of the subject Westbay System coupling.

*** Packer positions are referenced to the top Westbay System coupling on the packer.

Appendix B

Pump and Flow Meter Information

THE RANGER™

The Ranger™ Series 4" high-flow submersible pumps are perfect for applications requiring a large volume of water. Stainless steel components and high-density composite resin impellers provide exceptional resistance to corrosion in harsh water conditions. The high-torque motor and superior pump hydraulics are carefully matched to handle virtually any job.

APPLICATIONS

Water systems... irrigation, industrial, commercial, multiple housing and farm clean water use

SPECIFICATIONS

- Shell - 304 Stainless Steel
- Discharge - 304 Stainless Steel
- Discharge Bearing - Buna-N
- Impellers - Noryl®
- Diffusers - Noryl
- Suction Caps - Noryl
- Shaft and Coupling - 304 Stainless Steel
- Intake - 304 Stainless Steel
- Intake Screen - 304 Stainless Steel
- Cable Guard - 304 Stainless Steel
- Check Valve - Polyester Teflon®
- Fasteners - 304 Stainless Steel

FEATURES

Turn Up the Volume

High-flow capacities to 100 GPM make the Ranger 4" sub the easy choice for the really big jobs

More Stainless Steel

Shell, discharge and suction bowl, shaft and coupling, lead guard and suction screen - all lead-free

Staged for Toughness

Specially designed, high-density thermoplastic impellers resist the corrosive wear from harsh water conditions

High-powered Performance

Features a high-torque, heavy-duty motor for the most demanding applications



Noryl® is a registered trademark of the General Electric Company. Nylatron® is a registered trademark of The Polymer Corporation. Teflon® is a registered trademark of Dupont. Ranger™ is a trademark of Pentair Water.

ORDERING INFORMATION - PUMP

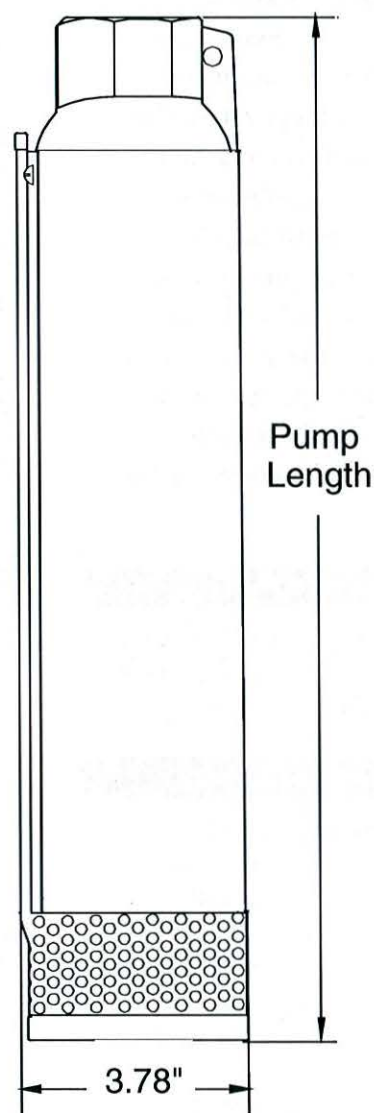
GPM	HP	Stages	Assembled Pump		
			Catalog Number	Length Inches*	Weight Pounds*
25	1	7	SS10-25	18	12
	1-1/2	9	SS15-25	21	14
	2	11	SS20-25	24	15
	3	15	SS30-25	30	19
	5	25	SS50-25	48	27
	7-1/2	37	SS75-25	67	55
35	1	4	SS10-35	15	10
	1-1/2	6	SS15-35	18	12
	2	8	SS20-35	22	14
	3	11	SS30-35	28	17
	5	18	SS50-35	43	24
	7-1/2	28	SS75-35	62	52
	10	37	SS100-35	75	63
50	1-1/2	6	SS15-50	21	14
	2	7	SS20-50	23	15
	3	10	SS30-50	31	19
	5	16	SS50-50	48	27
	7-1/2	25	SS75-50	70	59
	10	32	SS100-50	84	68
80	2	6	SS20-80	29	16
	3	9	SS30-80	39	20
	5	14	SS50-80	59	45
	7-1/2	22	SS75-80	66	59
	10	27	SS100-80	100	69

MOTOR / CONTROL BOX

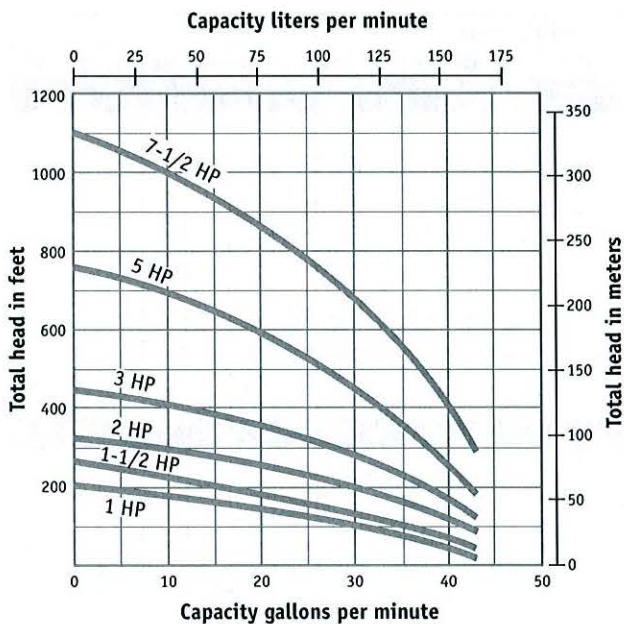
HP	No. of Wires	Volts	PH	PENTEK® Motor			PENTEK Control Box Catalog Number
				Catalog Number	Length Inches*	Weight Pounds*	
1	2	230	1	P42B0010A2	12	22	
	3	230	1	P43B0010A2	12	22	SMC-CR1021
1-1/2	2	230	1	P42B0015A2	15	30	
	3	230	1	P43B0015A2	14	27	SMC-CR1521
		230	3	P43B0015A3	13	23	SMC-CR1521
2	3	230	1	P43B0020A2	15	29	SMC-CR2021
		230	3	P43B0020A3	14	27	SMC-CR2021
3	3	230	1	P43B0030A2	24	49	SMC-CR3021
		230	3	P43B0030A3	21	40	SMC-CR3021
5	3	230	1	P43B0050A2	30	66	SMC-CR5021
		230	3	P43B0050A3	24	50	SMC-CR5021
7-1/2	3	230	3	P43B0075A3	30	66	SMC-CR7521

*Length and weight are approximate.

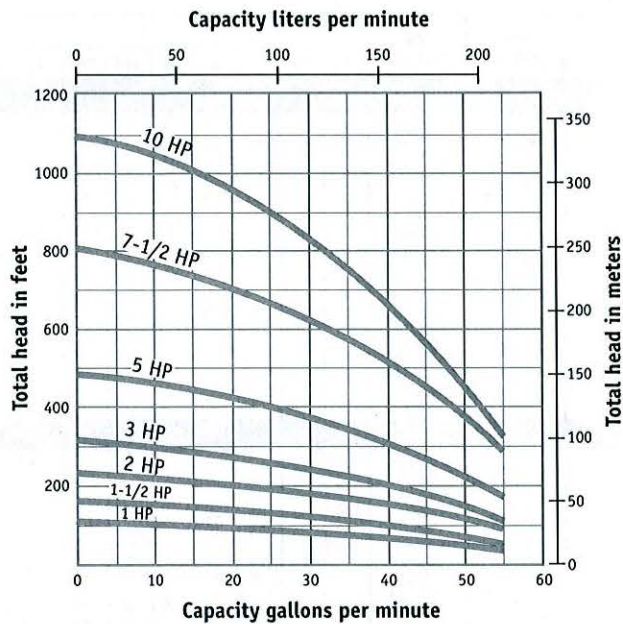
OUTLINE DIMENSIONS



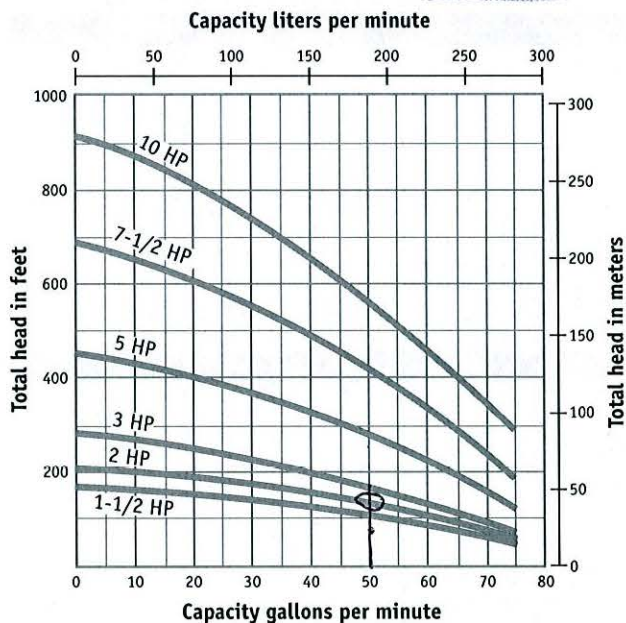
PUMP PERFORMANCE - 25 GPM



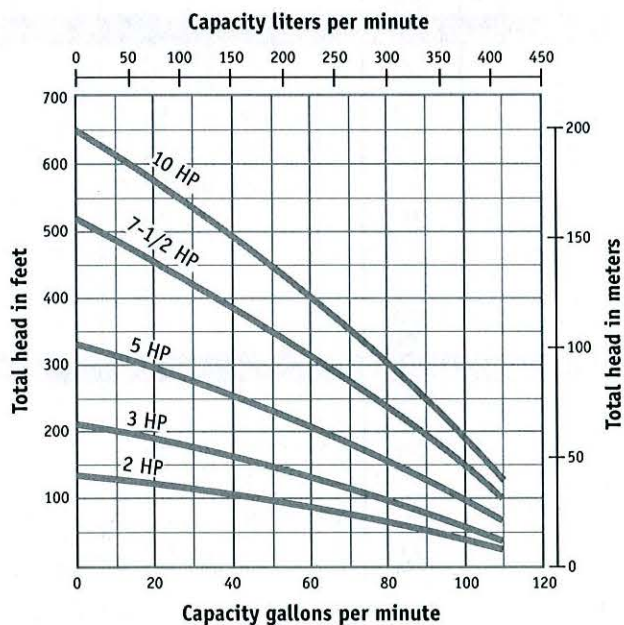
PUMP PERFORMANCE - 35 GPM



PUMP PERFORMANCE - 50 GPM



PUMP PERFORMANCE - 80 GPM



PUMP PERFORMANCE

HP	Catalog Number	Tank Pressure	Pumping Depth in Feet																											
			0	20	40	60	80	100	120	140	160	180	200	250	300	350	400	450	500	550	600	650	700	750	800	850				
25 GALLONS PER MINUTE																														
1	SS10-25	20/40 30/50	35 30	31 28	27 22	22 17	18 12	11																						
1-1/2	SS15-25	20/40 30/50	36	33	33 30	30 27	27 23	23 20	20 15	15																				
2	SS20-25	20/40 30/50			38	36	36 33	33 31	31 27	28 24	25 20	21 16	17																	
3	SS30-25	20/40 30/50							36	34	32	33 30	30 28	25 22	18 15															
5	SS50-25	20/40 30/50											38	37 36	34 33	31 30	28 27	25 24	22 21	18 16	13									
7-1/2	SS75-25	20/40 30/50														39	37	36	34 34	32 32	30 29	28 27	26 24	23 22	19 18	16 15				
35 GALLONS PER MINUTE																														
1	SS10-35	20/40 30/50	37 25	25																										
1-1/2	SS15-35	20/40 30/50	49 42	43 34	35 26	28 15																								
2	SS20-35	20/40 30/50		50 46	46 40	41 33	35 26	27 16																						
3	SS30-35	20/40 30/50				49	49 45	46 42	42 37	38 33	33 26	27 21	15																	
5	SS50-35	20/40 30/50								49	49 47	47 45	45 43	39 36	32 28	23 18														
7-1/2	SS75-35	20/40 30/50													50 49	47 46	44 43	40 38	36 34	32 30	27 24	16								
10	SS100-35	20/40 30/50														51 49	49 48	48 47	46 45	43 42	40 39	38 37	35 34	32 30	29 27	25 23				
50 GALLONS PER MINUTE																														
1-1/2	SS15-50	20/40 30/50	65 55	56 45	46 34	37 20																								
2	SS20-50	20/40 30/50	70 64	63 55	56 47	47 40	40 29	30																						
3	SS30-50	20/40 30/50	70	70 64	64 60	60 55	55 49	50 44	44 35	36 29																				
5	SS50-50	20/40 30/50				72 70	70 66	67 64	64 60	61 57	57 54	54 50	51 46	41 36	30 23															
7-1/2	SS75-50	20/40 30/50								70 67	67 65	65 63	60 58	55 53	49 46	43 40	35 32													
10	SS100-50	20/40 30/50												68 67	65 63	61 59	58 56	53 51	48 46	44 42	39 37	33 30								
80 GALLONS PER MINUTE																														
2	SS20-80	20/40 30/50	75 58	56 40	40																									
3	SS30-80	20/40 30/50	93 81	81 71	72 60	60 48	50 37																							
5	SS50-80	20/40 30/50		101 94	94 88	87 80	80 72	72 62	63 58	57 50	49 40	40																		
7-1/2	SS75-80	20/40 30/50			104	104 100	100 96	96 90	91 87	87 82	82 78	77 72	72 67	60 52	45 39															
10	SS100-80	20/40 30/50						104 101	97 95	95 93	93 90	89 86	84 81	72 70	68 65	58 55														

16273

Serial Number	NA			Reading	128	
Flow Rate	Low 3.0	Inter 120.0	Full 275.0			
Test Registration	✓	✓	✓			
Factor	✓	→			LAWCO	
Final % Registration	99.0	99.0	99.0			
Reg. Gear	Electronic	SB Gear	Electronic	Size	3" Cu. Ft. <input type="checkbox"/> Gal. <input checked="" type="checkbox"/>	
Style	SeaMetrics		Tester	KLB		Date 2/2010

16205

Serial Number	NA			Reading	33411.5	
Flow Rate	Low 4.0	Inter 60.0	Full 110.0			
Test Registration	✓	✓	✓			
Factor	✓	→			LAWCO	
Final % Registration	98.0	101.0	99.8			
Reg. Gear	Electronic	SB Gear	Electronic	Size	2" Cu. Ft. <input type="checkbox"/> Gal. <input checked="" type="checkbox"/>	
Style	SeaMetric		Tester	KLB		Date 2/2010

16304

Serial Number	NA			Reading	10.4	
Flow Rate	Low 4.0	Inter 60.0	Full 110.0			
Test Registration	✓	✓	✓			
Factor	✓	→			LAWCO	
Final % Registration	104.0	104.0	104.0			
Reg. Gear	Electronic	SB Gear	Electronic	Size	2" Cu. Ft. <input type="checkbox"/> Gal. <input checked="" type="checkbox"/>	
Style	SeaMetric		Tester	KLB		Date 2/2010

Appendix C

Step Test Water Level and Flow Rate Data

ORF WATER LEVEL DATA

Step TESTING

DATE: 8/31/10

NAME: F. Robinson / J. Doherty

WELL: EW-25

STEP 1 Flow Rate: 806 PM

Elapsed
time

TIME	E.T.	DTW	D. DOWN	FLOW RATE	TOTALIZER
—	STATIC	33.93	—	—	3659.1
0800:30	0.5	35.22			
0801	1	35.92			
0802	2	35.80		39.8	39.8 FR
0803	3	35.91		40	40 FR
0804	4	35.91		39.8	39.8 FR
0805	5	35.92			
0806	6	35.99		40.2	
0807	7	35.98		40.3	
0808	8	35.98		40.3	
0809	9	35.97		40.5	
0810	10	36.03		40.3	
0811	11	36.03		40.0	
0812	12	36.03		40.0	
0813	13	36.03		39.8	
0814	14	36.02		39.7	
0815	15	36.00		39.6	
0820	20	36.03		39.7	44 68.5
0825	25	36.02		39.9	
0830	30	36.03		39.4	483 40.5
0835	35	36.03		39.7	
0840	40	36.02		39.7	

ORF WATER LEVEL DATA

Step

TESTING

DATE: 8/31/10

NAME: FR/JD

WELL: EW-25

Step 2: Flow Rate 40 GPM

TIME	ΣT	DTW	D. DOWN	FLOW RATE	TOTALIZER
0845	45	36.06		39.9	5434.9
0850	50	36.07		39.8	
0900	60	36.08		39.8	6023.2
0910	70	36.09		39.6	
0920	80	36.13		39.8	6807.5
0930	90	36.13		40.0	
0940	100	36.13		39.7	7549.3
0950	110	36.15		39.8	
1000	120	36.18		39.6	

ORF WATER LEVEL DATA

Step TESTING

DATE: 8/31/10

NAME: FR/JD

WELL: EW-1S

Step 2 Flow Rate = 60

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1000:30	0.5	37.08		60.0	
1001	1	37.20		60.0	8456.6
1002	2	37.15		60.0	
1003	3	37.17		60.0	
1004	4	37.17		60.0	
1005	5	37.22		60.0	
1006	6	37.22		60.0	
1007	7	37.23		60.0	
1008	8	37.26		60.0	
1009	9	37.22		60.0	
1010	10	37.24		60.0	
1011	11	37.20		60.0	
1012	12	37.23		60.0	
1013	13	37.26		60.0	
1014	14	37.22		60.0	
1015	15	37.23		60.0	
1020	20	37.22		60.0	
1025	25	37.13		60.0	
1030	30	37.05		60.0	10164.4
1035	35	36.96		60.0	
1040	40	36.91		60.0	

10172

ORF WATER LEVEL DATA

Step TESTING

DATE: ~~10~~ 8/31/10

NAME: FR + JD

WELL: EW-15

Step 2 Flow Rate = 60

[illegible]

ORF WATER LEVEL DATA

Step TESTING

DATE: 8/31/10

NAME: FR + JD

WELL: FW-1S

Step 3 Flow Rate = 75 GPM

<u>TIME</u>	<u>ET</u>	<u>DTW</u>	<u>D. DOWN</u>	<u>FLOW RATE</u>	<u>TOTALIZER</u>
1200:30	0.5	37.04		75	
1201	1	37.21		75	
1202	2	37.20		75	
1202	3	37.20		75	
1204	4	37.23		75	
1205	5	37.20		75	16042.7
1206	6	37.21		75	
1207	7	37.21		75	
1208	8	37.22		75	
1209	9	37.25		75	
1210	10	37.23		75	
1211	11	37.23		75	
1212	12	37.25		75	
1213	13	37.22		75	
1214	14	37.22		75	
1215	15	37.23		75	
1220	20	37.22		75	
1225	25	37.18		75	
1230	30	37.22		75	17912.4
1235	35	37.21		75	
1240	40	37.22		76	

ORF WATER LEVEL DATA

Step TESTING

DATE: 8/31/10

NAME: FR + JD

WELL: EW-15

Flow Rate = 75 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
------	----	-----	---------	-----------	-----------

1245 45 37.22

76.0

1250 50 37.22

76.0

1255 55 37.18

750

1300 ~~1300~~ 60 37.20

75.0

2016.5.1

1310 70 37.18

75.0

1320-80 37.19

75.0

1330 90 37.18

75.0

22510.3

1340 100 37.21

75.0

1350 110 37.18

75.0

1400 120 37.18

75.0

ORF WATER LEVEL DATA

Step TESTING

DATE: 8/31/10

NAME: AR+ JD

WELL: ES-15

Step 4: 90 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1400	300.5	37.75		90 GPM	24713.6
1401	1	37.78		90 GPM	
1402	2	37.82		90 GPM	
1403	3	37.84		90.0 GPM	
1404	4	37.85		90 GPM	
1405	5	37.85		90 GPM	
1406	6	37.84		90 GPM	
1407	7	37.86		90 GPM	
1408	8	37.86		90 GPM	
1409	9	37.85		90 GPM	
1410	10	37.86		90 GPM	
1411	11	37.87		90 GPM	
1412	12	37.87		90 GPM	
1413	13	37.87		90 GPM	
1414	14	37.84		90 GPM	
1415	15	37.82		90 GPM	
1420	20	37.87		90 GPM	
1425	25	37.85		90 GPM	
1430	30	37.86		90 GPM	
1435	35	37.86		90 GPM	
1440	40	37.86		90 GPM	
1445	45	37.86		90 GPM	

ORF WATER LEVEL DATA

Step TESTING

DATE: 8/31/10

NAME: KR+JN

WELL: EW-15

Step 4: 90 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1445	45	37.86		90	
1450	50	37.86		90	
1455	55	37.86		90 GPM	
1500	60	37.84		90	30052.2
1510	70	37.87		90	
1520	80	37.87		90	
1530	90	37.86		90 GPM	3276.3
1540	100	37.86		90	
1550	110	37.85		90	
1600	120	37.85		90 GPM	

Water Quality

Time	T°C	Cond	DO	pH	ORP	NTU
1545	17.31	0.644	3.07	4.58	184.7	1.2
1550	17.31	0.642	3.07	4.57	188.3	1.1
1555	17.30	0.642	2.16	4.59	188.4	1.2
1600	17.33	0.641	2.18	4.61	189.2	1.1

Final flow meter reading 36385.7 EW-15
Initial flow " " 3659.1 EW-15

Total 32,726.6

Final flow meter reading 17726859 Combined
Initial flow meter reading 17692363 Combined
DO = mg/l Cond = ms/cm² 034496

33.93

ORF WATER LEVEL DATAStep TESTINGDATE: 8/31/10NAME: FR/JOWELL: EW-159

Recovery Pump off @ 16/0

<u>TIME</u>	<u>ET</u>	<u>DTW</u>	<u>D. DOWN</u>	<u>FLOW RATE</u>	<u>TOTALIZER</u>
1610:30	0.5	34.08			
1611	1	33.83			
1612	2	33.67			
1613	3	33.62			
1614	4	33.52 ^{33.59}			
1615	5	33.55			
1616	6	33.55			
1617	7	33.54			
1618	8	33.55			
1619	9	33.57			
1620	10	33.57			
1621	11	33.53			
1622	12	33.53			
1623	13	33.57			
1624	14	33.60			
1625	15	33.60			
1630	20	33.67			
1635	25	33.70			
1640	30	33.80			
1645	35	33.85			
1650	40	33.88			

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: AR+JD

WELL: EW-1D

Step 1: 40 GPM
Static = 35.00 Totalizer start = 535.4 Gallons

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
0800:30	0.5	36.30		40.7	
0801	1	36.80			
0802	2	36.05		40.3	
0803	3	36.08		40.2	
0804	4	36.07		40.4	
0805	5	36.10		40.5	
0806	6	36.11		40.6	
0807	7	36.09		40.5	
0808	8	36.12		40.1	
0809	9	36.09		40.4	
0810	10	36.12		40.5	
0811	11	36.14			
	12	missed reading, NOTES BY DOUGHERTY			
0813	13	36.17		40.4	
0814	14	36.15		40.4	
0815	15	36.17		40.3	
0820	20	36.17		40.7	
0825	25	36.16		40.2	
0830	30	36.17		40.6	
0835	35	36.17		40.5	
0840	40	36.19		40.3	
0845	45	36.20		40.2	

Relinquish to W.
Frank Robinson

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: AR + JD

WELL: FW-11

Step 1 = 406 pm

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
0850	50	36.20		40.5	
0855	55	36.20		40.7	
0900	60	36.19		40.3	
0910	70	36.24		40.4	
0920	80	36.25		40.3	
0930	90	36.27		40.3	
0940	100	36.31		40.3	4587.2
0950	110	36.30		40.3	
1000	120	36.33		40.3	

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: KR + JD

WELL: EW-2I

Step 2 = 60 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1000:30	0.5	36.55			
1001	1	36.80		61 GPM	
1002	2	36.83		62 GPM	
1003	3	36.83		60 GPM	
1004	4	36.82		60 GPM	
1005	5	36.82		60 GPM	
1006	6	36.82		60 GPM	
1007	7	36.81		60 GPM	
1008	8	36.81		60 GPM	
1009	9	36.82		60 GPM	
1010	10	36.83		60 GPM	
1011	11	36.82		60 GPM	
1012	12	36.82		60 GPM	
1013	13	36.83		60 GPM	
1014	14	36.81		60 GPM	
1015	15	36.81		60 GPM	
1020	20 20	36.83		60 GPM	
1025	25 25	36.82		60 GPM	
1030	30 30	36.81		60 GPM	
1035	35 35	36.84		60 GPM	
1040	40	36.82		60 GPM	
1045	45	36.83		60 GPM	

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: FR + JD

WELL: EW-7I

Step 2: 606Pr

[illegible]

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: RL+ JD

WELL: EW-1 I

Step 3 = 75 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1200:30	0.5	37.20			
1201	1	37.25		75 GPM	
1202	2	37.27		75 GPM	
1203	3	37.27		75 GPM	
1204	4	37.28		75 GPM	
1205	5	37.28		75 GPM	
1206	6	37.28		75 GPM	
1207	7	37.28		75 GPM	
1208	8	37.29		75 GPM	
1209	9	37.30		75 GPM	
1210	10	37.31		75 GPM	
1211	11	37.30		75 GPM	
1212	12	37.31		75 GPM	
1213	13	37.31		75 GPM	
1214	14	37.28		75 GPM	
1215	15	37.28		75 GPM	
1220	20	37.31		75 GPM	
1225	25	37.31		75 GPM	
1230	30	37.30		75 GPM	
1235	35	37.30		75 GPM	
1240	40	37.31		75 GPM	
1245	45	37.31		75 GPM	

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: Fr + Jd

WELL: EW-1 I

Step 3 = 75 blin

[illegible]

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: KR+ JD

WELL: EW-1I

Step 4 = 90 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1400:30	0.5	37.73			
1401	1	37.73		90 GPM	
1402	2	37.74		90 GPM	
1403	3	37.74		90 GPM	
1404	4	37.75		90 GPM	
1405	5	37.75		90 GPM	
1406	6	37.74		90 GPM	
1407	7	37.76		90 GPM	
1408	8	37.76		90 GPM	
1409	9	37.76		90 GPM	
1410	10	37.76		90 GPM	
1411	11	37.74		90 GPM	
1412	12	37.75		90 GPM	
1413	13	37.76		90 GPM	
1414	14	37.75		90 GPM	
1415	15	37.75		90 GPM	
1420	20	37.75		90 GPM	
1425	25	37.76		90 GPM	
1430	30	37.76		90 GPM	
1435	35	37.76		90 GPM	
1440	40	37.75		90 GPM	
1445	45	37.75			

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: KR+ JD

WELL: EW-1I

Step 4 = 90 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1450	50	37.76		90 GPM	
1455	55	37.76		90 GPM	
1500	60	37.75		90 GPM	
1510	70	37.76		90 GPM	
1520	80	37.75		90 GPM	
1530	90	37.75		90 GPM	
1540	100	37.74		90 GPM	
1550	110	37.75		90 GPM	
1600	120	37.75		90 GPM	

Totalizer End = 32893.7

off @ 1608

Water Quality						
Time	T°C	Cond	DO	pH	ORP	WTU
1545	15.98	0.394	5.42	4.58	238.7	1.24
1550	15.95	0.394	4.33	4.53	250.3	0.51
1555	15.95	0.393	4.23	4.55	252.5	0.53
1600	15.98	0.392	4.09	4.56	254.6	0.71

DO = mg/l

Cond = mS/cm

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/1/10

NAME: FR + JD

WELL: EW-2T

Recovery
off 1608

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
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1608:30	0.5	35.72			
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1609	1	35.65			
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1610	2	35.60			
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1611	3	35.58			
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1612	4	35.58			
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1613	5	35.55			
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1614	6	35.56			
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1615	7	35.56			
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1616	8	35.56			
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1617	9	35.55			
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1618	10	35.54			
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1619	11	35.54			
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1620	12	35.54			
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1621	13	35.54			
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1622	14	35.53			
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1623	15	35.53			
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1628	20	35.54			
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1633	25	35.51			
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1638	30	35.51			
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1643	35	35.50			
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40

45

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: FR + JD

WELL: FW-1D

Step 1: 60 GPM
Static = 35.70 Totalizer = 97850.2.2

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
0600:30	0.5	37.00			
0601	1	37.25			
0602	2	37.40			
0603	3	37.58		60 GPM	
0604	4	37.62		61 GPM	
0605	5	37.61		61 GPM	
0606	6	37.61		61 GPM	
0607	7	37.65		61 GPM	
0608	8	37.65		61 GPM	
0609	9	37.65		61 GPM	
0610	10	37.66		61 GPM	
0611	11	37.66		61 GPM	
0612	12	37.66		61 GPM	
0613	13	37.67		61 GPM	
0614	14	37.66		61 GPM	
0615	15	37.66		61 GPM	
0620	20	37.68		61 GPM	
0625	25	37.72		61 GPM	
0630	30	37.73		61 GPM	
0635	35	37.73		61 GPM	
0640	40	37.75		61 GPM	
0645	45	37.79		61 GPM	

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: KR + JD

WELL: EW-10

Step 1: 60 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
0650	50	37.81		61.6 pm	
0655	55	37.82		61.6 pm	
0700	60	37.82		61.6 pm	
0710	70	37.83		61.6 pm	
0720	80	37.87		61.6 pm	
0730	90	37.89		61.6 pm	984084.7
0740	100	37.93		61.6 pm	
0750	110	37.94		61.6 pm	
0800	120	37.94		61.6 pm	

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: FR + JD

WELL: EW-1D

Step 2: 100 Gpm

	TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
0800:36	0.5		39.25			
0801	1		38.95			
0802	2		39.25		101 Gpm	
0803	3		39.34		99 Gpm	
0804	4		39.15		99 Gpm	
0805	5		39.16		100 Gpm	
0806	6		39.21		100 Gpm	
0807	7		39.22		100 Gpm	
0808	8		39.22		100 Gpm	
0809	9		39.21		100 Gpm	
0810	10		39.22		100 Gpm	
0811	11		39.23		100 Gpm	
0812	12		39.23		100 Gpm	
0813	13		39.23		100 Gpm	
0814	14		39.24		100 Gpm	
0815	15		39.24		100 Gpm	
0820	20		39.25		100 Gpm	
0825	25		39.25		100 Gpm	
0830	30		39.26		100 Gpm	
0835	35		39.26		100 Gpm	
0840	40		39.28		100 Gpm	
0845	45		39.28		100 Gpm	

3 of 9

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: LR + JD

WELL: EW-1D

Step 2: 100 GPa

[illegible]

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: FR + JD

WELL: EW-2D

Step 3: 140 Gpm

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1000:30	0.5	40.52			
1001	1	40.58		140 Gpm	
1002	2	40.62		140 Gpm	
1003	3	40.63		140 Gpm	
1004	4	40.63		140 Gpm	
1005	5	40.64		140 Gpm	
1006	6	40.65		140 Gpm	
1007	7	40.67		140 Gpm	
1008	8	40.68		140 Gpm	
1009	9	40.68		140 Gpm	
1010	10	40.68		140 Gpm	
1011	11	40.69		140 Gpm	
1012	12	40.70		140 Gpm	
1013	13	40.71		140 Gpm	
1014	14	40.72		140 Gpm	
1015	15	40.71		140 Gpm	
1020	20	40.71		140 Gpm	
1025	25	40.73		140 Gpm	
1030	30	40.71		140 Gpm	
1035	35	40.71		140 Gpm	
1040	40	40.72		140 Gpm	
1045	45	40.72		140 Gpm	

ORF WATER LEVEL DATA

Step

TESTING

DATE: 9/2/10

NAME: LRJJD

WELL: EW-20

Step 3: 140 Gram

[illegible]

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: FR + JD

WELL: EW-10

Step 4: 180 GPM

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1200:30	0.5	42.00			
1201	1	42.11		180 GPM	
1202	2	42.13		180 GPM	
1203	3	42.12		180 GPM	
1204	4	42.12		180 GPM	
1205	5	42.12		180 GPM	
1206	6	42.13		180 GPM	
1207	7	42.12		180 GPM	
1208	8	42.12		180 GPM	
1209	9	42.13		180 GPM	
1210	10	42.13		180 GPM	
1211	11	42.13		180 GPM	
1212	12	42.15		180 GPM	
1213	13	42.14		180 GPM	
1214	14	42.13		180 GPM	
1215	15	42.13		180 GPM	
1220	20	42.13		180 GPM	
1225	25	42.13		180 GPM	
1230	30	42.15		180 GPM	
1235	35	42.18		180 GPM	
1240	40	42.20		180 GPM	
1245	45	42.18		180 GPM	

ORF WATER LEVEL DATA

Step TESTING

DATE: 9/2/10

NAME: KL + JD

WELL: EW-1D

Step Test 4 →
Final Totalizer = 180 GPM
→ 1037912.4

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1250	50	42.19		180 GPM	
1255	55	42.19		180 GPM	
1300	60	42.20		180 GPM	
1310	70	42.21		180 GPM	
1320	80	42.21		180 GPM	
1330	90	42.21		180 GPM	
1340	100	42.22		180 GPM	
1350	110	42.21		180 GPM	
1400	120	42.21		180 GPM	

Water Quality						
Time	T°C	Cond.	DO	pH	ORP	ATU
1345	14.61	0.322	4.66	4.62	277.8	1.21
1350	14.57	0.322	4.13	4.60	283.7	1.23
1355	14.55	0.322	3.85	4.60	288.4	1.03
1400	14.58	0.322	3.76	4.60	291.0	1.04

DO = mg/l
Cond = mS/cm

ORF WATER LEVEL DATA

Step TESTING

off @ 1412

DATE: 9/2/10

NAME: FR+JD

WELL: EW-10

Recovery

TIME	ET	DTW	D. DOWN	FLOW RATE	TOTALIZER
1412:30	0.5	37.20			
1413	1	37.00			
1414	2	36.83			
1415	3	36.70			
1416	4	36.62			
1417	5	36.65			
1418	6	36.58			
1419	7	36.60			
1420	8	36.57			
1421	9	36.55			
1422	10	36.57			
1423	11	36.55			
1424	12	36.52			
1425	13	36.50			
1426	14	36.48			
1427	15	36.50			
1433	20	36.44			
1438	25	36.43			
1443	30	36.41			
1448	35	36.38			
1453	40	36.38			
1458	45	36.38			

Appendix D

Sustained Yield Test Water Level and Flow Rate Data

Pumping Test Field Data Sheet

Well No. EW-15Site Old Roosevelt Field

Totalizer start = 36869.5

Measured By: _____

Start 1030

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 1 of 1

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	0951	Static	34.67			70	
		0.5					
		1					
	1032	2	37.90			70	
		3					
		4					
	1035	5	38.18			70	
		6					
		7					
		8					
		9					
	1040	10	38.28			70	
		11					
		12					
		13					
		14					
	1045	15	38.33			70	
	1050	20	38.39			70	
	1055	25	38.42			70	
	1100	30	38.45			70	
	1105	35	38.46			70	
	1110	40	38.51			70	
	1115	45	38.50			70	
	1120	50	38.51			70	
	1130	60	38.53			70	
	1140	70	38.54			70	
	1150	80	38.54			70	
	1200	90	38.56			70	

Pumping Test Field Data Sheet

Well No. EW-1SSite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	1210	100	38.52			70	
	1220	110	38.53			70	
	1230	120	38.55			70	
	1300	150	38.55			70	
	1330	180	38.55			70	
	1400	210	38.54			70	
	1430	240	38.52			70	
	1500	270	38.51			70	
	1530	300	38.51			70	
	1600	330	38.49			70	
	1630	360	38.49			70	
	1700	390	38.49			70	
	1730	420	38.49			70	
	1800	450	38.22			70	
	1830	480	37.90			70	
	1900	510	37.74			70	
	1930	540	37.61			70	
	2000	570	37.58			70	
	2030	600	37.55			70	
	2130	660	37.50			70	
	2230	720	37.45			70	
	2330	780	37.6			70	
9/8/10	0300	840	37.89			70	
	1300	900	37.53			70	
	2300	960	37.34			70	
	3300	1020	37.28			70	
	4300	1080	37.78			70	
	5300	1140	38.18			70	

2 HRS.

3 HRS.

4 HRS.

5 HRS.

6 HRS.

7 HRS.

8 HRS.

9 HRS.

10 HRS.

11 HRS.

12 HRS.

18 HRS.

Pumping Test Field Data Sheet

Well No. EW-15Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 3 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/8/10	6 ³⁰	1200	38.31			70	
	0730	1260	38.35			70	
	0830	1320	38.51			70	
	0930	1380	38.60			70	
	10 ³⁰	1440	38.62			70	
	1130	1500	38.64			70	
	1230	1560	38.64			70	
	1330	1620	38.25			70	
	1430	1680	38.50			70	
	1530	1740	38.52			70	
	1630	1800	38.00			70	
	1730	1860	37.71			70	
	1830	1920	37.61			70	
	1930	1980	37.50			70	
	2030	2040	37.52			70	
	2130	2100	38.50			70	
	2230	2160	37.87			70	
	2330	2220	37.51			70	
9/9/10	0 ³⁰	2280	37.42			70	
	130	2340	37.41			70	
	0230	2400	37.30			70	
	0330	2460	37.53			70	
	430	2520	38.02			70	
	530	2580	38.10			70	
	630	2640	38.26			70	
	0730	2700	38.49			7	
	0830	2760	38.59			70	AM
	0930	2820	38.59			70	

20 hrs.

22 hrs.

24 hrs.

(1 day 2 hrs.)
26 hrs.(1 day 4 hrs.)
30 hrs.

Pumping Test Field Data Sheet

Well No.

FW-15

Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page:

4 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/9/10	1030	2880	38.69			70	
	1130	2940	38.79			70	
	1230	3000	38.73			70	
	1330	3060	38.72			70	
	1430	3120	38.69			70	
	1530	3180	38.64			70	
	1630	3240	38.60			70	
	1730	3300	38.58			70	
	1830	3360	37.92			70	
	1930	3420	37.67			70	
	2030	3480	37.55			70	
	2130	3540	37.47			70	
	2230	3600	37.40			70	
	2330	3660	37.70			70	
9/10/10	0030	3720	38.10			70	
	0130	3780	37.57			70	
	0230	3840	37.36			70	
	0330	3900	37.32			70	
	0430	3960	37.80			70	
	0530	4020	38.10			70	
	0630	4080	38.31			70	
	0730	4140	38.41			70	
	0830	4200	38.52			70	
	0930	4260	38.66			70	
	1030	4320	38.65			70	

Pumping Test Field Data Sheet

Well No.

EW-1SSite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recoveryoff @ 1030

Elevation MP: _____

Remarks: _____

Page:

1 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
<u>9/10/10</u>	<u>28.65</u>	Static	<u>38.65</u>				
	<u>1030.30</u>	0.5	<u>35.62</u>				
	<u>1031</u>	1	<u>35.44</u>				
	<u>1032</u>	2	<u>35.35</u>				
	<u>1033</u>	3	<u>35.32</u>				
	<u>1034</u>	4	<u>35.26</u>				
	<u>1035</u>	5	<u>35.16</u>				
	<u>1036</u>	6	<u>35.17</u>				
	<u>1037</u>	7	<u>35.17</u>				
	<u>1038</u>	8	<u>35.14</u>				
	<u>1039</u>	9	<u>35.12</u>				
	<u>1040</u>	10	<u>35.12</u>				
	<u>1041</u>	11	<u>35.11</u>				
	<u>1042</u>	12	<u>35.09</u>				
	<u>1043</u>	13	<u>35.06</u>				
	<u>1044</u>	14	<u>35.05</u>				
	<u>1045</u>	15	<u>35.04</u>				
	<u>1050</u>	20	<u>34.96</u>				
	<u>1055</u>	25	<u>34.92</u>				
	<u>1100</u>	30	<u>34.95</u>				
	<u>1105</u>	35	<u>34.90</u>				
	<u>1110</u>	40	<u>34.90</u>				
	<u>1115</u>	45	<u>34.88</u>				
	<u>1120</u>	50	<u>34.88</u>				
	<u>1130</u>	60	<u>34.90</u>				
	<u>1140</u>	70	<u>34.90</u>				
	<u>1150</u>	80	<u>34.88</u>				
	<u>1200</u>	90	<u>34.86</u>				

Pumping Test Field Data Sheet

Well No. EW-15Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of 2

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10	12 10	100	34.85				FRobinson
	12 20	110	34.81				
	12 30	120	34.78				
	13 00	150	34.86 34.75				
	13 30	180	33.88				
	14 00	210	34.35				
1433	1430	240	34.58				
	15 00	270	34.62				
	15 30	300	34.68				
		330	END OF OBSERVATIONS				
		360					
		390					
		420					
		450					
		480					
		510					
		540					
		570					
		600					
		660					
		720					
		780					
		840					
		900					
		960					
		1020					
		1080					
		1140					

Pumping Test Field Data Sheet

Well No. EW-15Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page: 3 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
		1200					
		1260					
		1320					
		1380					
		1440					
		1500					
		1560					
		1620					
		1680					
		1740					
		1800					
		1860					
		1920					
		1980					
		2040					
		2100					
		2160					
		2220					
		2280					
		2340					
		2400					
		2460					
		2520					
		2580					
		2640					
		2700					
		2760					
		2820					

Pumping Test Field Data Sheet

Well No. EW-13Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 4 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
		2880					
		2940					
		3000					
		3060					
		3120					
		3180					
		3240					
		3300					
		3360					
		3420					
		3480					
		3540					
		3600					
		3660					
		3720					
		3780					
		3840					
		3900					
		3960					
		4020					
		4080					
		4140					
		4200					
		4260					
		4320					

Pumping Test Field Data Sheet

Well No. EW-1ISite Old Roosevelt Field

Totalizer Start = 332 36.9

Measured By: _____

Start 1030

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 1 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	0947	Static	35.55				
		0.5					
		1					
	1032	2	37.51			70	
		3					
		4					
		5				70	
	1038	6	37.75			70	
		7					
		8					
		9					
	1040	10	37.71			70	
		11					
		12					
		13					
		14					
	1045	15	37.81			70	
	1050	20	37.83			70	
	1055	25	37.88			70	
	1100	30	37.89			70	
	1105	35	37.91			70	
	1110	40	37.91			70	
	1115	45	37.93			70	
	1120	50	37.95			70	
	1130	60	37.97			70	
	1140	70	38.00			70	
	1150	80	38.00			70	
	1200	90	38.00			70	

Pumping Test Field Data Sheet

Well No.

EW-1 ISite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test:

Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

2 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	1210	100	38.02			70	
	1220	110	38.00			70	
	1230	120	38.00			70	
	1300	150	38.01			70	
	1330	180	38.00			70	
	1400	210	37.99			70	
	1430	240	37.98			70	
	1500	270	37.97			70	
	1530	300	37.97			70	
	1600	330	37.90			70	
	1630	360	37.91			70	
	1700	390	37.91			70	
	1730	420	37.90			70	
	1800	450	37.17			70	
	1830	480	36.65			70	
	1900	510	36.55			70	
	1930	540	36.47			70	
	2000	570	36.48			70	
	2030	600	36.48			70	
	2130	660	36.30			70	
	2230	720	36.21			70	
	2330	780	36.3			70	
9/8/10 A.H.	2430	840	36.81			70	
9/8/10	130	900	36.27			70	
	230	960	36.11			70	
	330	1020	36			70	
	430	1080	37.02			70	
	530	1140	34.45			70	

Pumping Test Field Data Sheet

Well No.

EW-11Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test:

Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

3 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/8/10	6 ³⁰	1200	37.67			70	
	6730	1260	37.80			70	
	0830	1320	37.95			70	
	0930	1380	38.02			70	
	1030	1440	38.04			70	24 HRS
	1130	1500	38.05			70	
	1230	1560	38.06			70	
	1330	1620	37.61			70	
	1430	1680	37.25			70	
	1530	1740	37.94			70	
	1630	1800	36.95			70	
	1730	1860	36.58			70	
	1830	1920	36.43			70	
	1930	1980	36.30			70	
	2030	2040	36.68			70	
	2130	2100	37.42			70	
	22 ³⁰	2160	36.67			70	
	23 ³⁰	2220	36.22			70	
9/9/10	0 ³⁰	2280	36.20			70	
	1 ³⁰	2340	36.10			70	
	0230	2400	36.05			70	
	0330	2460	36.81			70	
	4 ³⁰	2520	37.36			70	
	5 ³⁰	2580	37.48			70	
	6 ³⁰	2640	37.71			70	
	0730	2700	37.85			70	
	0830	2760	37.94			69	END
	0930	2820	38.05			70	

Pumping Test Field Data Sheet

Well No.

FW-1ISite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page:

4 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/9/10	1030	2880	38.11			70	
	1130	2940	38.15			70	
	1230	3000	38.17			70	
	1330	3060	38.18			70	
	1430	3120	38.17			70	
	1530	3180	38.10			70	
	1630	3240	38.05			70	
	1730	3300	37.91			70	
	1830	3360	36.80			70	
	1930	3420	36.46			70	
	2030	3480	36.86			70	
	2130	3540	36.20			70	
	2230	3600	36.14			70	
	2330	3660	36.93			70	
9/10/10	0030	3720	37.36				
	0130	3780	36.25			70	
	0230	3840	36.12			70	
	0330	3900	35.98			70	
	0430	3960	37.11			70	
	0530	4020	37.42			70	
	0630	4080	37.63			70	
	0730	4140	37.78			70	
	0830	4200	37.91			70	
	0930	4260	38.11			70	
	1030	4320	38.15			70	

Pumping Test Field Data Sheet

Well No.

EW-11Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

off @ 1030

Remarks: _____

Page:

1 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10	—	Static	38.15				
	1030	0.5	36.32				
	1031	1	36.30				
	1032	2	36.20				
	1033	3	36.16				
	1034	4	36.11				
	1035	5	36.07				
	1036	6	36.04				
	1037	7	36.02				
	1038	8	36.02				
	1039	9	36.01				
	1040	10	36.00				
	1041	11	36.00				
	1042	12	35.95				
	1043	13	35.95				
	1044	14	35.85				
	1045	15	35.93				
	1050	20	35.90				
	1055	25	35.80				
	1100	30	35.82				
	1105	35	35.81				
	1110	40	35.80				
	1115	45	35.79				
	1120	50	35.77				
	1130	60	35.77				
	1140	70	35.75				
	1150	80	35.73				
	1200	90	35.70				

Pumping Test Field Data Sheet

Well No.

EW-11Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

2 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10	1210	100	35.68				
	1220	110	35.69				
	1230	120	35.68				
	1300	150	35.15				
	1330	180	34.18				
	1400	210	35.18				
1433	1430	240	35.40				
	1500	270	35.45				
	1530	300	35.45				
		330					
		360					
		390					
		420					
		450					
		480					
		510					
		540					
		570					
		600					
		660					
		720					
		780					
		840					
		900					
		960					
		1020					
		1080					
		1140					

Pumping Test Field Data Sheet

Well No.

EW-10Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Elevation MP: _____

Remarks: _____

Phase of Test: Drawdown

Recovery

Page:

1 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	0941	Static	36.30				
		0.5					
		1					
		2					
	1033	3	39.90			110	
		4					
		5					
	1036	6	39.97			110	
		7					
		8					
		9					
	1040	10	40.07			110	
		11					
		12					
		13					
		14					
	1045	15	40.15			110	
	1050	20	40.16			110	
	1055	25	40.21			110	
	1100	30	40.22			110	
	1105	35	40.25			110	
	1110	40	40.26			110	
	1115	45	40.27			110	
	1120	50	40.28			110	
	1130	60	40.27			110	
	1140	70	40.27			110	
	1150	80	40.30			110	
	1200	90	40.36			110	

Pumping Test Field Data Sheet

Well No. EW-10Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
<u>7/2</u> <u>12/10</u>	<u>1210</u>	<u>100</u>	<u>40.35</u>			<u>110</u>	
<u>9/7/10</u>	<u>1220</u>	<u>110</u>	<u>40.32</u>			<u>110</u>	
	<u>1230</u>	<u>120</u>	<u>40.32</u>			<u>110</u>	
	<u>1300</u>	<u>150</u>	<u>40.34</u>			<u>110</u>	
	<u>1330</u>	<u>180</u>	<u>40.35</u>			<u>110</u>	
	<u>1400</u>	<u>210</u>	<u>40.35</u>			<u>110</u>	
	<u>1430</u>	<u>240</u>	<u>40.35</u>			<u>110</u>	
	<u>1500</u>	<u>270</u>	<u>40.33</u>			<u>110</u>	
	<u>1530</u>	<u>300</u>	<u>40.33</u>			<u>110</u>	
	<u>1600</u>	<u>330</u>	<u>40.28</u>			<u>110</u>	
	<u>1630</u>	<u>360</u>	<u>40.22</u>			<u>110</u>	
	<u>1700</u>	<u>390</u>	<u>40.29</u>			<u>110</u>	
	<u>1730</u>	<u>420</u>	<u>40.25</u>			<u>110</u>	
	<u>1800</u>	<u>450</u>	<u>39.27</u>			<u>110</u>	
	<u>1830</u>	<u>480</u>	<u>38.80</u>			<u>110</u>	
	<u>1900</u>	<u>510</u>	<u>38.60</u>			<u>110</u>	
	<u>1930</u>	<u>540</u>	<u>38.53</u>			<u>110</u>	
	<u>2000</u>	<u>570</u>	<u>38.46</u>			<u>110</u>	
	<u>2030</u>	<u>600</u>	<u>38.48</u>			<u>110</u>	
	<u>2130</u>	<u>660</u>	<u>38.36</u>			<u>110</u>	
	<u>2230</u>	<u>720</u>	<u>38.3</u>			<u>110</u>	
	<u>2330</u>	<u>780</u>	<u>38.16</u>			<u>110</u>	
<u>7/8/10</u>	<u>030</u>	<u>840</u>	<u>38.87</u>			<u>110</u>	
	<u>130</u>	<u>900</u>	<u>38.31</u>			<u>110</u>	
	<u>230</u>	<u>960</u>	<u>38.20</u>			<u>110</u>	
	<u>330</u>	<u>1020</u>	<u>38.1</u>			<u>110</u>	
	<u>430</u>	<u>1080</u>	<u>37.57</u>			<u>110</u>	
	<u>530</u>	<u>1140</u>	<u>37.85</u>			<u>110</u>	

Pumping Test Field Data Sheet

Well No.

EW-1.0Site Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test

Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

3 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/8/10	6 ³⁰	1200	40.30			110	
	6730	1260	40.20			110	
	6830	1320	40.30			110	
	6930	1380	40.32			110	
	7030	1440	40.37			110	24 hrs
	7130	1500	40.39			110	
	7230	1560	40.41			110	
	7330	1620	39.92			110	
	7430	1680	40.30			110	
	7530	1740	40.30			110	
	7630	1800	38.95			110	
	7730	1860	38.65			110	
	7830	1920	38.41			110	
	7931	1980	38.38			110	
	8031	2040	38.98			110	
	8131	2100	39.75			110	
	8230	2160	38.65			110	
	8330	2220	38.34			110	
9/9/10	8430	2280	38.27			110	
	8530	2340	38.16			110	
	8630	2400	38.14			110	
	8730	2460	39.15			110	
	8830	2520	37.63			110	
	8931	2580	38.85			110	
	9031	2640	40.11			110	
	9130	2700	40.21			110	
	9230	2760	40.35			110	240
	9330	2820	40.41			110	

Pumping Test Field Data Sheet

Well No. EW-1DSite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 4 of

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/9/10	1030	2880	40.57			110	
	1130	2940	40.60			110	
	1230	3000	40.58			110	
	1330	3060	40.54			110	
	1430	3120	40.52			110	
	1530	3180	40.44			110	
	1630	3240	40.35			110	
	1730	3300	40.11			110	
	1830	3360	38.90			110	
	1930	3420	38.56			110	
	2030	3480	38.38			110	
	2130	3540	38.28			110	
	2230	3600	38.22			110	
	2330	3660	38.30			110	
9/10/10	0030	3720	39.65			110	
	0130	3780	38.33			110	
	0230	3840	39.15			110	
	0330	3900	38.11			110	
	0430	3960	39.45			110	
	0530	4020	39.79			110	
	0630	4080	39.95			110	
	0730	4140	40.12			110	
	0830	4200	40.27			110	
	0930	4260	40.48			110	
	1030	4320	40.51				

Pumping Test Field Data Sheet

Well No. EW-1DSite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

off @ 1030

Remarks: _____

Page: 1 of

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10	—	Static	40.51				
	1030:30	0.5	36.37	37.15			
	1031	1	37.08				
	1032	2	37.02				
	1033	3	36.98				
	1034	4	36.95				
	1035	5	36.90				
	1036	6	36.88				
	1037	7	36.88				
	1038	8	36.86				
	1039	9	36.85				
	1040	10	36.83				
	1041	11	36.77				
	1042	12	36.77				
	1043	13	36.75				
	1044	14	36.74				
	1045	15	36.73				
	1050	20	36.68				
	1055	25	36.65				
	1100	30	36.65				
	1105	35	36.63				
	1110	40	36.61				
	1115	45	36.58				
	1120	50	36.61				
	1130	60	36.60				
	1140	70	36.58				
	1150	80	36.58				
	1200	90	36.57				

Pumping Test Field Data Sheet

Well No. EW-1DSite Old Roosevelt Field

Measured By: _____

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of _____

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10	1210	100	36.57				
	1220	110	36.58				
	1230	120	36.55				
	1300	150	35.54				
	1330	180	35.05				
	1400	210	36.02				
1433	1430	240	36.10				
	1500	270	36.31				
	1530	300	36.28				
		330					
		360					
		390					
		420					
		450					
		480					
		510					
		540					
		570					
		600					
		660					
		720					
		780					
		840					
		900					
		960					
		1020					
		1080					
		1140					

Pumping Test Field Data Sheet

Well No. GWP-10Site Old Roosevelt FieldMeasured By: John N. Dougherty / see remarks

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 1 of 5

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	1029	Static	101.6	—			Pump off. on.
"	1030.5	0.5	101.62				Test Start at 1030
9/7/10	1031	1	101.62				Readings by Dougherty
	1032	2	101.67				
	1033	3	101.67				
	1034	4	101.73				
	1035	5	101.62				
	1036	6	101.64				
	1037	7	101.64				
	1038	8	101.64				
	1039	9	101.65				
	1040	10	101.64				
	—	11	—				
	—	12	—				
	1043	13	101.76				
	1044	14	101.78				
	1046	15	101.8				
	1050	20	101.66				
	—	25	—				
	1100	30	101.71				
	1105	35	101.75				
	1110	40	101.74				
	1115	45	101.74				
	1120	50	101.8				
	1130	60	101.8				
	1140	70	101.80				
	1150	80	101.64				
↓	1200	90	101.88				

on 9/8/10

Flow meter not working

on 9/8/10

Pump off. on
Flow meter not working

Mike Ennot starts recording

Pumping Test Field Data Sheet

Well No. BUNG. 10Site Old Roosevelt FieldMeasured By: See remarks

Distance to Pumping Well: _____

Phase of Test Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of 5

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	12 ¹⁰	100	101.94			Ø	
	12 ²⁰	110	101.91				
	12 ³⁰	120	101.97				
		150	101				
		180					
	14 ²⁶	210					
	14 ³⁰ JR	240	101.87			Ø	
		270					
		300					
		330					
	16 ²⁵	360	101.81				off Pump ON.
		390					
		420					
		450					
	18 ⁵⁵	480	40.19			Ø	off Pump off
		510					
		540					
		570					
	21 ³⁰	600	39.56			Ø	off Pump off
		660					
		720					
		780	ON 9/8/10				Pump ON 9/8/10
	22 ³⁰	840	39.48			Ø	OFF
		900					
		960	ON 9/8/10				
		1020	840 ON 9/8/10				Pump ON 9/8/10
9/8/10	00 ³³	1080	40.33			Ø	OFF
		1140	ON 9/8/10				

Pumping Test Field Data Sheet

Well No.

Bldg 10

GWP-10

Site Old Roosevelt Field

Measured By:

see remarks

Distance to Pumping Well:

Phase of Test:

Drawdown

Recovery

Elevation MP:

Remarks:

Page:

3 of 5

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/8/10		1200					
		1260					
	0230	1320	39.45				Pump off
		1380					
		1440					
		1500	1080				
	0430	1560	101.46				off Pump on
		1620					
		1680					
		1740					
	0630	1800	101.65				off Pump on.
	0826	1860	101.71				off Pump on.
		1920	1320				
		1980					
		2040					
		2100					
		2160					
		2220					
		2280					
		2340					
		2400					
		2460					
		2520					
		2580					
		2640					
		2700					
		2760					
		2820					

Pumping Test Field Data Sheet

Well No.

GWP-10

Site Old Roosevelt Field

Measured By:

See remarks

Distance to Pumping Well: _____

Phase of Test:

Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

4 of 5

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
		1200					
		1260					
		1320					
		1380					
9/8/10	1038	1440	101.28				Pump ON JRD.
		1500					
"	1235	1560	101.27				Pump ON JRD.
		1620					
	1424	1680	101.22				Pump ON JR
		1740					
	1626	1800	40.41				Pump OFF JR
		1860					
	1824	1920	39.69				Pump OFF JR
		1980					
	2026	2040	100.98				PUMP ON ER
		2100					
	2229	2160	39.97				PUMP OFF ER
		2220					
9/9/10	0025	2280	38.05				PUMP OFF ER
		2340					
"	0225	2400	39.35				PUMP OFF ER
		2460					
"	0424	2520	101.53				PUMP ON ER
		2580					
	0625	2640	101.73				PUMP ON ER
		2700					
	0825	2760	101.85				Pump ON ER
		2820					

Pumping Test Field Data Sheet

Well No. GWR-10Site Old Roosevelt FieldMeasured By: see remarks

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: SOLINST serial #4402Page: 5 of 5

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/9/10	1025	2880	101.92				Pump ON JR
		2940					
	1225	3000	102.00				Pump ON JR
		3060					
	1425	3120	102.00				Pump ON JR
		3180					
	1627	3240	101.89				Pump ON JR
		3300					
	1824	3360	40.13				Pump OFF JR
		3420					
	2025	3480	39.60				Pump OFF ER
		3540					
	2226	3600	39.36				Pump OFF ER
		3660					
9/10/10	0024	3720	101.58				Pump ON ER
		3780					
	0225	3840	39.14				Pump OFF ER
		3900					
	0425	3960	101.42				Pump ON ER
	06	4020					
	0624	4080	101.69				Pump ON ER
		4140					
	0826	4200	101.88				Pump ON JR
		4260					
	1010	4320	101.99				Pump ON JR

Pumping Test Field Data Sheet

Well No. GWP-10Site Old Roosevelt FieldMeasured By: J. DOUGHERTY

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 1 of 2

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/11	1030	Static	7				Stop Test.
	1030.5	0.5					
	1031	1					
	1032	2					
	1033	3					GWP-10
	1034	4	101.85				Pump ON.
	1035	5	101.84				J. DOUGHERTY
	1036	6	101.89				Pump ON
	1037	7	101.9				
	1038	8	—				
	1039	9	101.91				
	1040	10	—				
	1041	11	—				
	1042	12	101.88				
	1043	13	101.88				
	1044	14	101.85				
	1045	15	101.8				
	1050	20	101.94				
	1055	25	101.85				
	1100	30	101.75				
	1105	35	101.8				
	1110	40	101.73				
	1115	45	101.81				
	1120	50	101.82				
	1130	60	101.76				
	1140	70	101.69				
	1150	80	101.67				
	1200	90	101.75				

Pumping Test Field Data Sheet

Well No. GWP-10Site Old Roosevelt FieldMeasured By: J.N. DOUGHERTY

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of 2

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10	1210	100	101.75				GWP-10 ON.
	1220	110	101.76				AM
	1230	120	101.69				AM
	7	150	2				
		180					
		210					
	1422	240	101.54				GWP-10 ON FR
	2	270	2				
		300					
	1700	330	101.67				Pump. ON. QD
9/10/10	1705	360	PUMP OFF				END OF READINGS.
		390					
		420					
		450					
		480					
		510					
		540					
		570					
		600					
		660					
		720					
		780					
		840					
		900					
		960					
		1020					
		1080					
		1140					

101.67

Pumping Test Field Data Sheet

Well No. GLP-11Site Old Roosevelt FieldMeasured By: Allan Hunter / see remarksSOLARSER A0503

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page: 1 of 4

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9-7-10	10:12	Static	76.2			1210	
	10:30	0.5					start test
9-7-10	10:32	2 $\frac{1}{2}$	76.29			1209	
		2					
9-7-10	10:34	4 $\frac{1}{2}$	76.31			1208	
9-7-10	10:38	8 $\frac{1}{2}$	76.3			1208	
9-7-10	10:43	13 $\frac{1}{2}$	76.37			1207	
9-7-10	10:49	19 $\frac{1}{2}$	76.37			1207	
9-7-10	10:56	26 $\frac{1}{2}$	76.42			1207	
9-7-10	10:57	27 $\frac{1}{2}$	76.4			1207	
		9	76.4	A.H. 9/7/10			
9-7-10	11:00	30 $\frac{1}{2}$	76.4			1207	
		11	76.42	A.H. 9/7/10			
9-7-10	11:02	32 $\frac{1}{2}$	76.42			1209	
		13					
		14					
9-7-10	11:07	37 $\frac{1}{2}$	76.47			1207	
9-7-10	11:12	42 $\frac{1}{2}$	76.46			1206	
9-7-10	11:17	47 $\frac{1}{2}$	76.46			1207	
9-7-10	11:22	52 $\frac{1}{2}$	76.45			1208	
9-7-10	11:27	57 $\frac{1}{2}$	76.46			1208	
9-7-10	11:32	62 $\frac{1}{2}$	76.54			1208	
		45					
		50					
		60					
9/7/10	11:40	70	76.53				
	11:50	80	76.46			1207	
	12:00	90	76.56			1207	

A.H.
9/7/10

Pumping Test Field Data Sheet

Well No. 6WP-11Site Old Roosevelt FieldMeasured By: See remarks

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page: 2 of 4

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/7/10	12:10	100	76.51			1209	A. Hunter
	12:20	110	76.54			1208	
	12:30	120	76.54			1208	
		150	76.52				
		180					
		210					
	1430	240	76.52			1208	
		270					
		300					
		330					
	1628	360	76.43			1208	
		390					
		420					
		450					
	1830	480	73.30			1231	
		510					
		540					
		570					
	2032	600	72.83			1233	
		660					
	2232	720	72.68			1235	
		780					
9/8/10	037	840	73.26			1231	
		900					
	234	960	72.46			1236	
		1020					
9/10/10	458	1080	75.65			1215	
		1140					

Pumping Test Field Data Sheet

Well No. 6WP-11Site Old Roosevelt FieldMeasured By: Dei Lemans

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page:

3 of 4

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/8/10	6 ³²	1200	76.22			1210	
		1260					
	0830	1320	76.44			1210	F. Robinson.
		1380					
	1044	1440	76.52			1206	AND.
		1500					
	1237	1560	76.53			1206	AND.
		1620					
	1428	1680	76.42			1209	FR
		1740					
	1630	1800	73.41			1230	FR
		1860					
	1828	1920	72.83			1233	FR
		1980					
	20 ³²	2040	75.28			1219	ME
		2100					
	22 ³³	2160	73.11			1232	ME
		2220					
9/9/10	0 ³³	2280	72.75			1234	ME [OSS]
		2340					
9/9/10	2 ³⁴	2400	72.62			1236	ME
		2460					
	4 ³²	2520	72.95			1214	ME
		2580					
	6 ³⁴	2640	76.20			1210	ME
		2700					
	0829	2760	76.49			1210	FR
	0829	2820	76.49			1210	FR - FR

Pumping Test Field Data Sheet

Well No. 6WP-11Site Old Roosevelt FieldMeasured By: see remarks

Distance to Pumping Well: _____

Phase of Test: Drawdown Recovery

Elevation MP: _____

Remarks: _____

Page: 4 of 4

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/9/10	1028	2880	76.66			1208	FR
		2940					
	1228	3000	76.78			1208	FR
		3060					
	1428	3120	76.65			1207	FR
		3180					
	1630	3240	76.51			1207	FR
		3300					
	1828	3360	73.29			1233	FR
		3420					
	2032	3480	72.80			1234	ME
		3540					
	2233	3600	72.63			1236	ME
		3660					
9/10/10	0737	3720	75.90			1214	ME
		3780					
	230	3840	72.65			1236	ME
		3900					
	431	3960	75.65			1216	ME
		4020					
	630	4080	76.03			1207	ME
		4140					
	0829	4200	76.49			1210	FR
		4260					
	1013	4320	76.56			1208	FR

Pumping Test Field Data Sheet

Well No.

GWP-11

Site Old Roosevelt Field

Measured By:

Allan Hunter

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

1 of 2

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
9/10/10		Static	7				Stop Test
		0.5					
		1					
		2					observations
	1033	3	76.48				by A. Hunter
		4					
	1035	5	76.52				
	1036	6	76.52				
	1037	7	76.5			1209	
		8					
	1039	9	76.51			1205	
	1040	10	76.55				
	1041	11	76.55			1207	
		12					
	1043	13	76.52			1207	
	1044	14	76.46			1206	
	1045	15	76.44			1207	
	1050	20	76.47				
A.H. 9/10	1055	25	76.47	A.H. 9/10		1207	
	1100	30	76.42			1209	
11/10	1105	35	76.42			1207	
A.H. 9/10	1110	40	76.47	A.H. 9/10		1207	
	1115	45	76.41			1207	
	1120	50	76.4			1207	
	1130	60	76.39			1207	
	1140	70	76.35			1205	
✓	1150	80	76.35			1205	
	1200	90	76.36			1207	

Pumping Test Field Data Sheet

Well No.

GWP-11Site Old Roosevelt Field

Measured By:

Allan Hunter / see remarks

Distance to Pumping Well: _____

Phase of Test: Drawdown

Recovery

Elevation MP: _____

Remarks: _____

Page:

2 of 2

Date	Time	Elapsed Time (min)	DTW (ft)	Drawdown (ft)	Orifice Pressure (in)	Pumping Rate (gpm)	Remarks
	1210	100	76.34			1207	A.H.
	1220	110	76.29			1207	A.H.
	1230	120	76.36			1208	A.H.
		150					
		180					
		210					
	1425	240	76.02			1212	F.R.
		270					
		300					
	1712	330	74.02			1225	A.H.
		360					End of
		390					Observations
		420					
		450					
		480					
		510					
		540					
		570					
		600					
		660					
		720					
		780					
		840					
		900					
		960					
		1020					
		1080					
		1140					

A.H. 9/10/2010

Appendix E

Weather Data

Lat: N 40 ° 45 ' 3 " (40.751 °)
 Lon: W 73 ° 36 ' 47 " (-73.613 °)
 Elevation (ft): 115
 MADIS ID: AT063
 Hardware: Davis Vantage Pro
 Weather Station Software: WeatherDisplay:10.37
KNYCARLE1
 Carle Place, Carle Place, NY

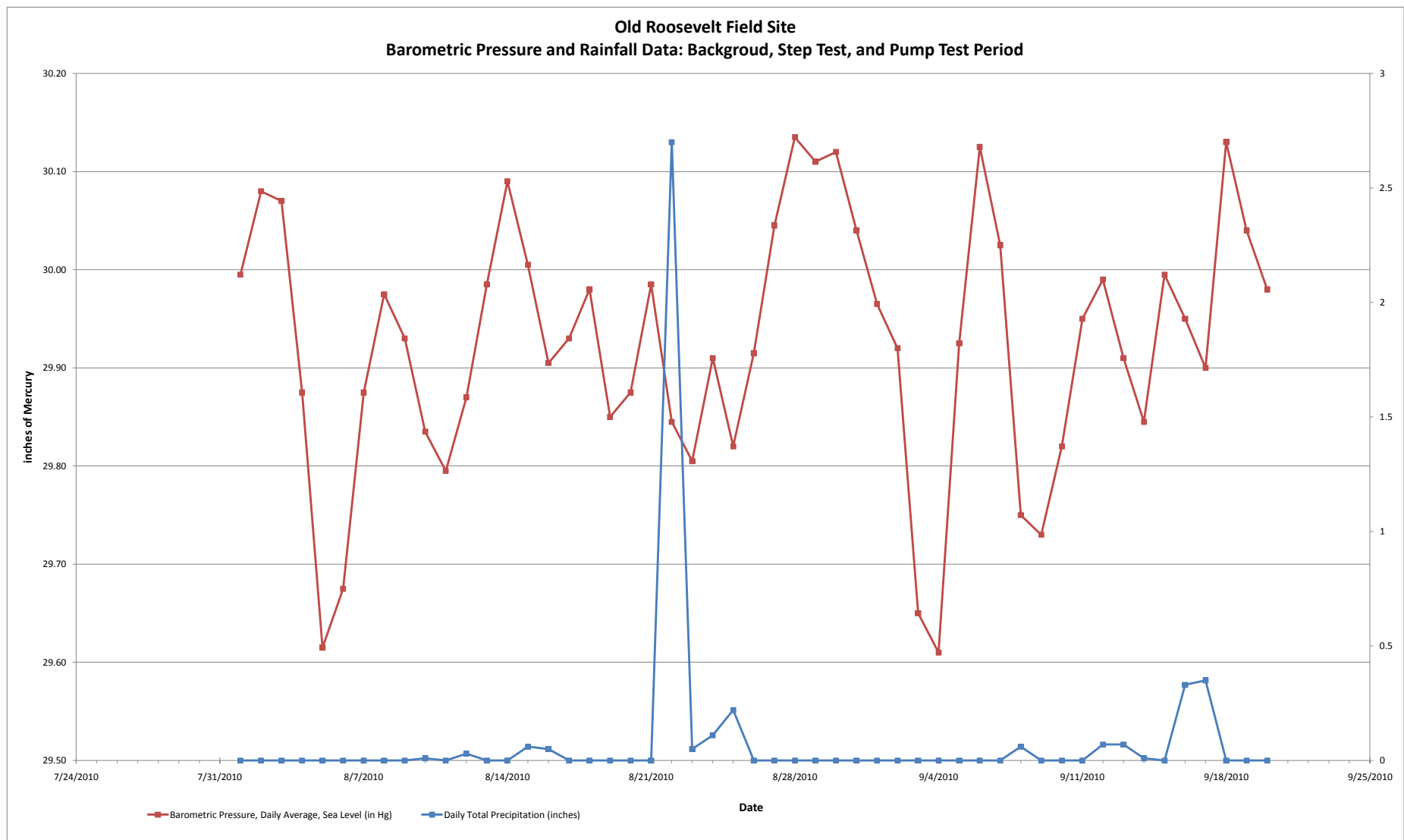
2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Barometric Pressure, Daily Average, Sea Level (in Hg)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Daily Total Precipitation (inches)
August	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum
8/1/2010	79	72	65	62	58	52	83	63	41	30.06	30.00	29.93	-	-	-	7	2	14	0
8/2/2010	81	75	68	64	61	54	87	64	43	30.11	30.08	30.05	-	-	-	8	3	18	0
8/3/2010	81	77	72	65	63	60	73	62	57	30.09	30.07	30.05	-	-	-	6	4	16	0
8/4/2010	87	82	76	73	69	64	87	67	57	30.05	29.88	29.7	-	-	-	9	5	18	0
8/5/2010	93	84	75	74	70	63	93	65	37	29.7	29.62	29.53	-	-	-	14	3	26	0
8/6/2010	87	81	66	70	59	44	83	51	25	29.79	29.68	29.56	-	-	-	8	2	18	0
8/7/2010	82	72	59	69	56	50	84	61	35	29.95	29.88	29.8	-	-	-	9	2	17	0
8/8/2010	86	77	69	73	67	57	92	73	38	30.01	29.98	29.94	-	-	-	10	3	20	0
8/9/2010	89	80	72	73	68	59	96	70	44	29.98	29.93	29.88	-	-	-	9	3	20	0
8/10/2010	90	81	74	72	67	62	86	62	43	29.89	29.84	29.78	-	-	-	6	1	14	0.01
8/11/2010	89	78	72	72	68	62	95	73	41	29.83	29.80	29.76	-	-	-	7	2	13	0
8/12/2010	76	73	70	69	65	61	94	77	61	29.92	29.87	29.82	-	-	-	6	1	12	0.03
8/13/2010	78	72	67	62	57	51	85	60	40	30.05	29.99	29.92	-	-	-	8	2	16	0
8/14/2010	76	68	56	61	55	48	93	65	41	30.12	30.09	30.06	-	-	-	8	2	14	0
8/15/2010	76	71	62	69	63	60	96	77	58	30.06	30.01	29.95	-	-	-	9	3	20	0.06
8/16/2010	83	76	69	74	71	63	96	86	71	29.95	29.91	29.86	-	-	-	7	2	14	0.05
8/17/2010	90	80	72	74	68	58	99	70	36	29.97	29.93	29.89	-	-	-	7	1	116	0
8/18/2010	77	76	72	66	59	55	76	57	47	30.04	29.98	29.92	-	-	-	2	1	6	0
8/19/2010	87	76	64	68	61	54	99	64	34	29.92	29.85	29.78	-	-	-	10	2	14	0
8/20/2010	88	78	66	68	60	44	96	59	23	29.95	29.88	29.8	-	-	-	6	2	14	0
8/21/2010	80	74	62	63	58	48	80	58	45	30.02	29.99	29.95	-	-	-	7	2	13	0
8/22/2010	79	75	70	75	72	69	100	92	78	29.97	29.85	29.72	-	-	-	14	4	24	2.7
8/23/2010	72	69	67	72	67	60	100	93	76	29.9	29.81	29.71	-	-	-	9	5	20	0.05
8/24/2010	68	66	62	63	60	58	95	82	74	29.96	29.91	29.86	-	-	-	8	5	21	0.11
8/25/2010	67	66	63	65	64	62	99	95	94	29.86	29.82	29.78	-	-	-	7	2	16	0.22
8/26/2010	81	73	65	65	59	50	91	64	34	30	29.92	29.83	-	-	-	9	2	18	0
8/27/2010	78	68	56	54	51	46	92	59	35	30.09	30.05	30	-	-	-	8	2	14	0
8/28/2010	78	68	54	62	54	51	95	64	39	30.18	30.14	30.09	-	-	-	7	2	12	0
8/29/2010	93	76	58	63	58	50	96	60	24	30.17	30.11	30.05	-	-	-	7	1	10	0
8/30/2010	90	77	61	64	59	53	95	59	29	30.17	30.12	30.07	-	-	-	7	2	14	0
8/31/2010	94	81	66	67	63	59	90	59	32	30.11	30.04	29.97	-	-	-	7	1	13	0
9/1/2010	93	82	70	69	65	55	91	60	29	30.02	29.97	29.91	-	-	-	7	1	12	0
9/2/2010	89	81	74	70	66	61	77	62	45	29.96	29.92	29.88	-	-	-	9	2	22	0
9/3/2010	82	77	72	74	70	64	93	79	65	29.88	29.65	29.42	-	-	-	7	2	17	0
9/4/2010	79	74	66	68	50	40	80	44	28	29.8	29.61	29.42	-	-	-	18	6	28	0
9/5/2010	76	66	54	50	43	38	78	46	27	30.05	29.93	29.8	-	-	-	12	3	24	0
9/6/2010	76	66	50	61	50	40	94	61	29	30.2	30.13	30.05	-	-	-	9	2	16	0
9/7/2010	82	74	66	68	64	58	83	72	53	30.15	30.03	29.9	-	-	-	12	4	21	0
9/8/2010	89	76	65	69	57	40	86	56	19	29.91	29.75	29.59	-	-	-	9	4	24	0.06
9/9/2010	71	65	62	50	49	48	64	57	46	29.77	29.73	29.69	-	-	-	12	5	22	0
9/10/2010	71	64	59	53	50	48	75	61	47	29.9	29.82	29.74	-	-	-	7	2	16	0
9/11/2010	77	66	53	57	51	46	92	62	38	30	29.95	29.9	-	-	-	7	2	13	0
9/12/2010	66	62	58	58	56	52	96	80	63	30.02	29.99	29.96	-	-	-	5	2	13	0.07
9/13/2010	72	63	60	62	59	57	100	89	59	30	29.91	29.82	-	-	-	5	1	12	0.07
9/14/2010	76	66	56	62	51	42	99	65	32	29.87	29.85	29.82	-	-	-	12	2	20	0.01
9/15/2010	70	66	57	45	44	41	61	44	36	30.12	30.00	29.87	-	-	-	8	3	18	0
9/16/2010	72	62	49	68	55	43	97	80	55	30.14	29.95	29.76	-	-	-	9	3	21	0.33
9/17/2010	71	66	59	67	59	49	99	78	53	30.09	29.90	29.71	-	-	-	7	2	14	0.35
9/18/2010	70	63	58	56	54	51	90	72	54	30.18	30.13	30.08	-	-	-	6	1	13	0

Lat: N 40 ° 45 ' 3 " (40.751 °)
Lon: W 73 ° 36 ' 47 " (-73.613 °)
Elevation (ft): 115
MADIS ID: AT063
Hardware: Davis Vantage Pro
Weather Station Software: WeatherDisplay:10.37

KNYCARLE1

Carle Place, Carle Place, NY

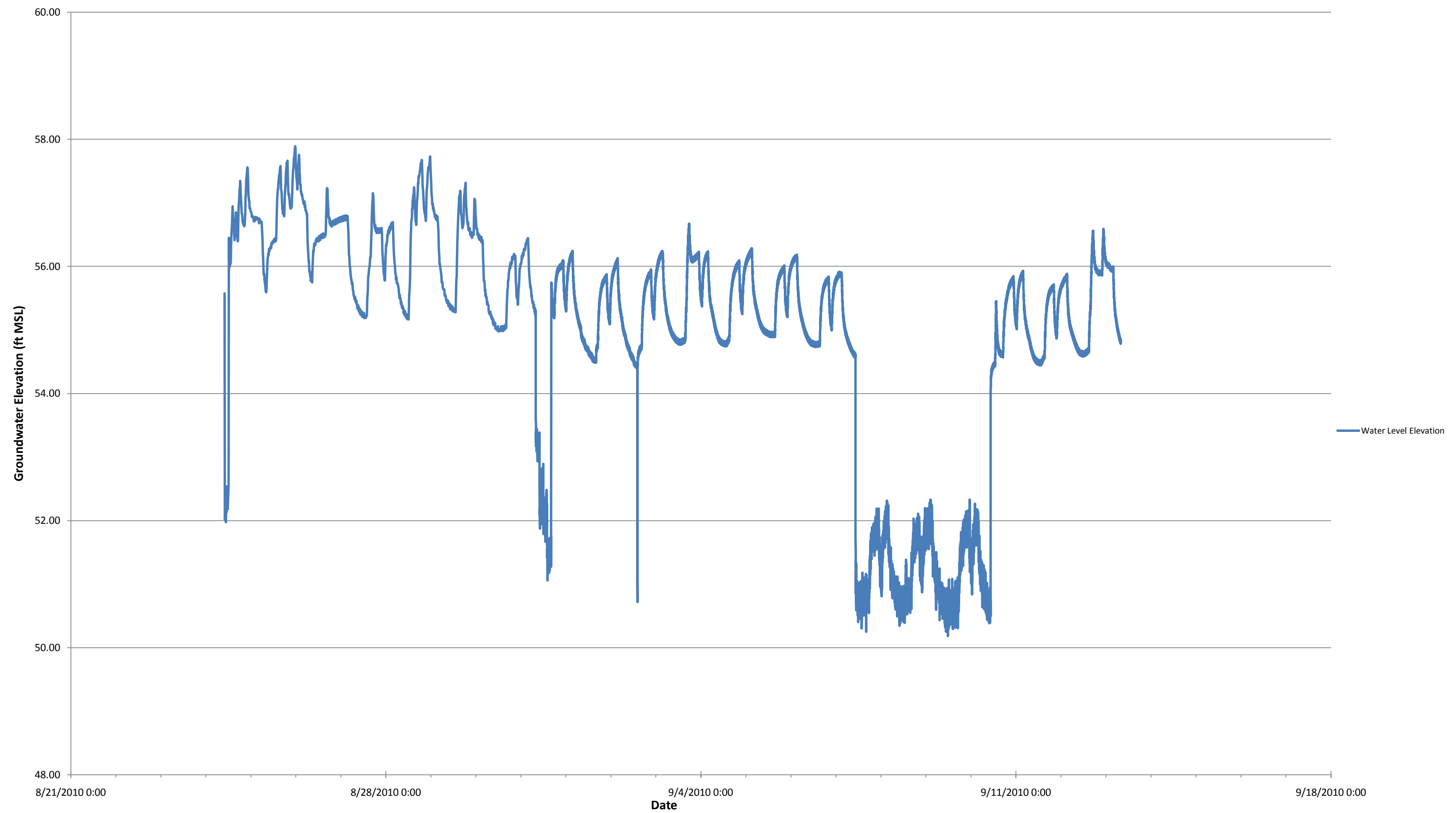
2010	Temp. (°F)			Dew Point (°F)			Humidity (%)			Barometric Pressure, Daily Average, Sea Level (in Hg)			Visibility (mi)			Wind (mph)		Gust Speed (mph)	Daily Total Precipitation (inches)
9/19/2010	77	66	54	63	58	53	99	76	53	30.14	30.04	29.94	-	-	-	5	1	10	0
9/20/2010	71	65	55	62	48	40	83	58	33	30.07	29.98	29.89	-	-	-	8	3	20	0

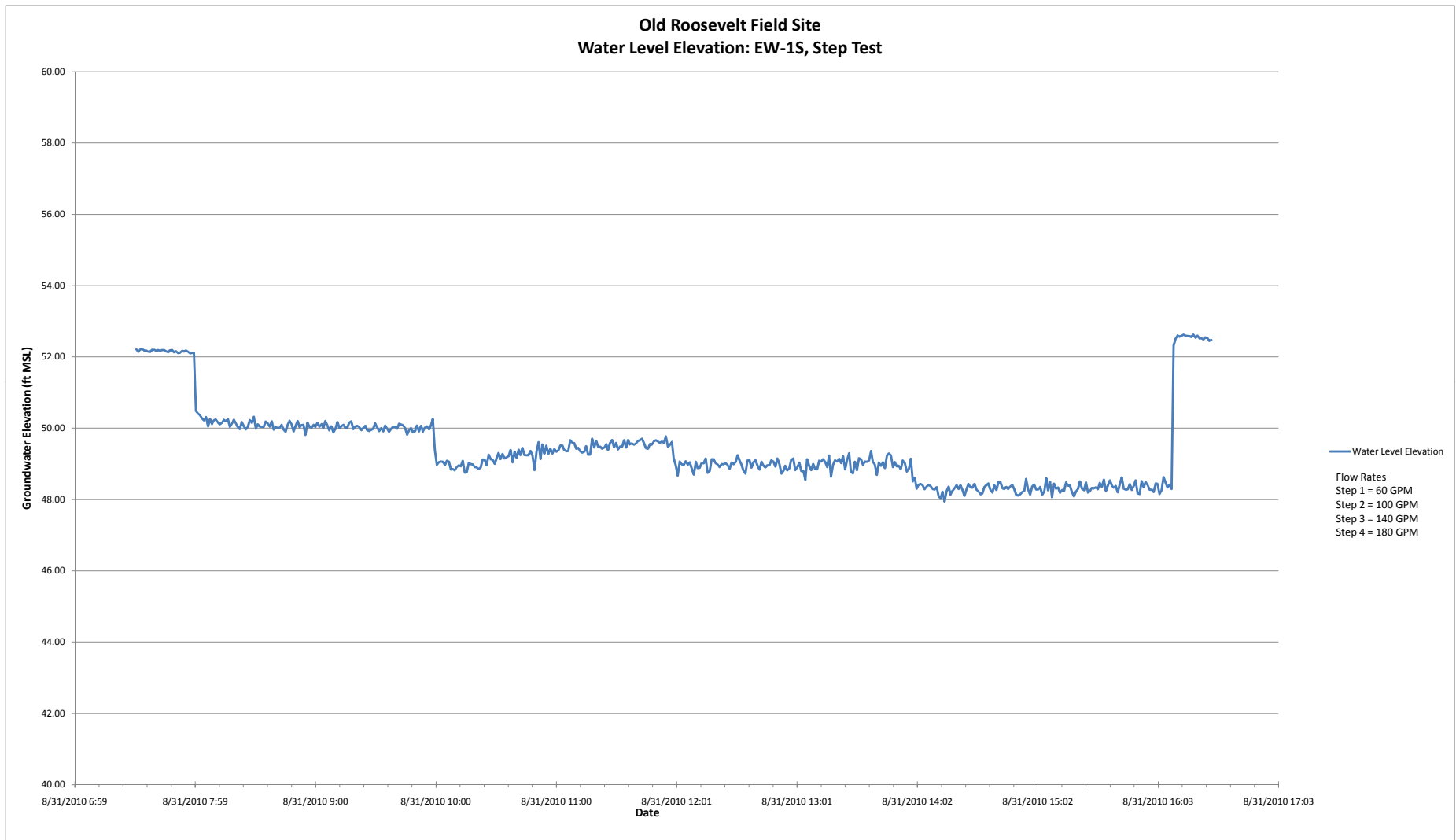


Appendix F

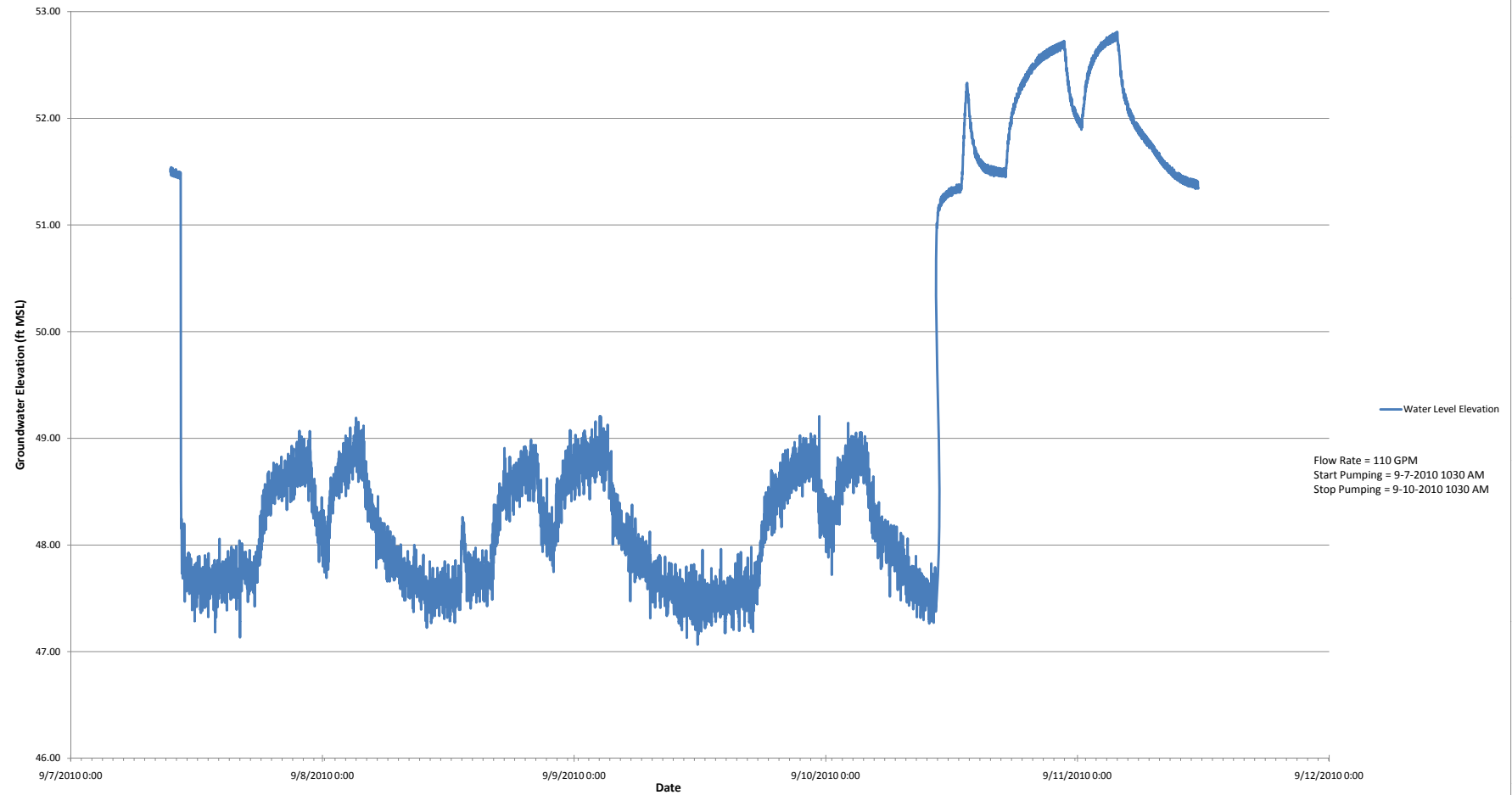
Water Level Data Graphs

Old Roosevelt Field Site
Water Level Elevation: EW-1S, All Data

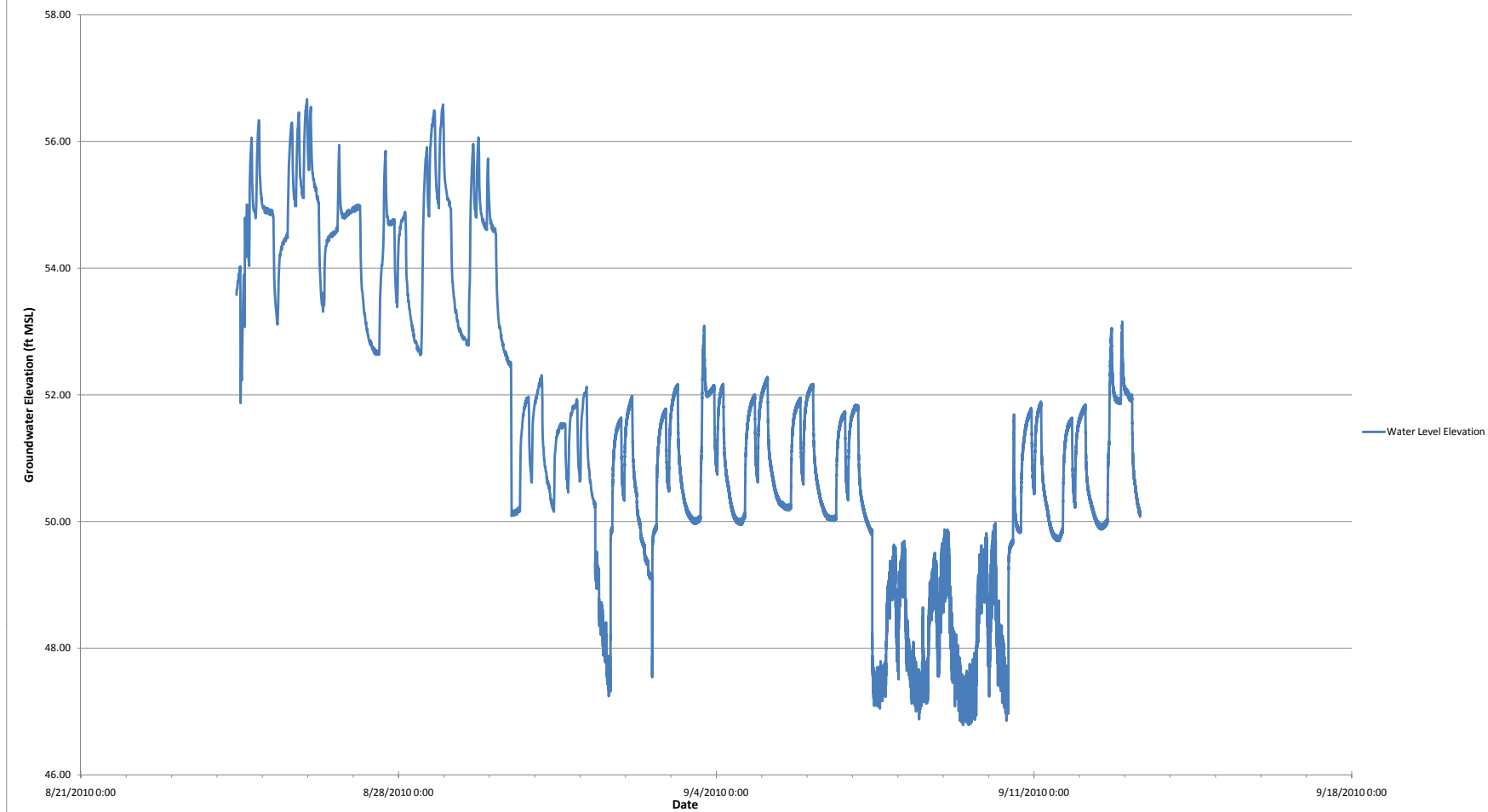




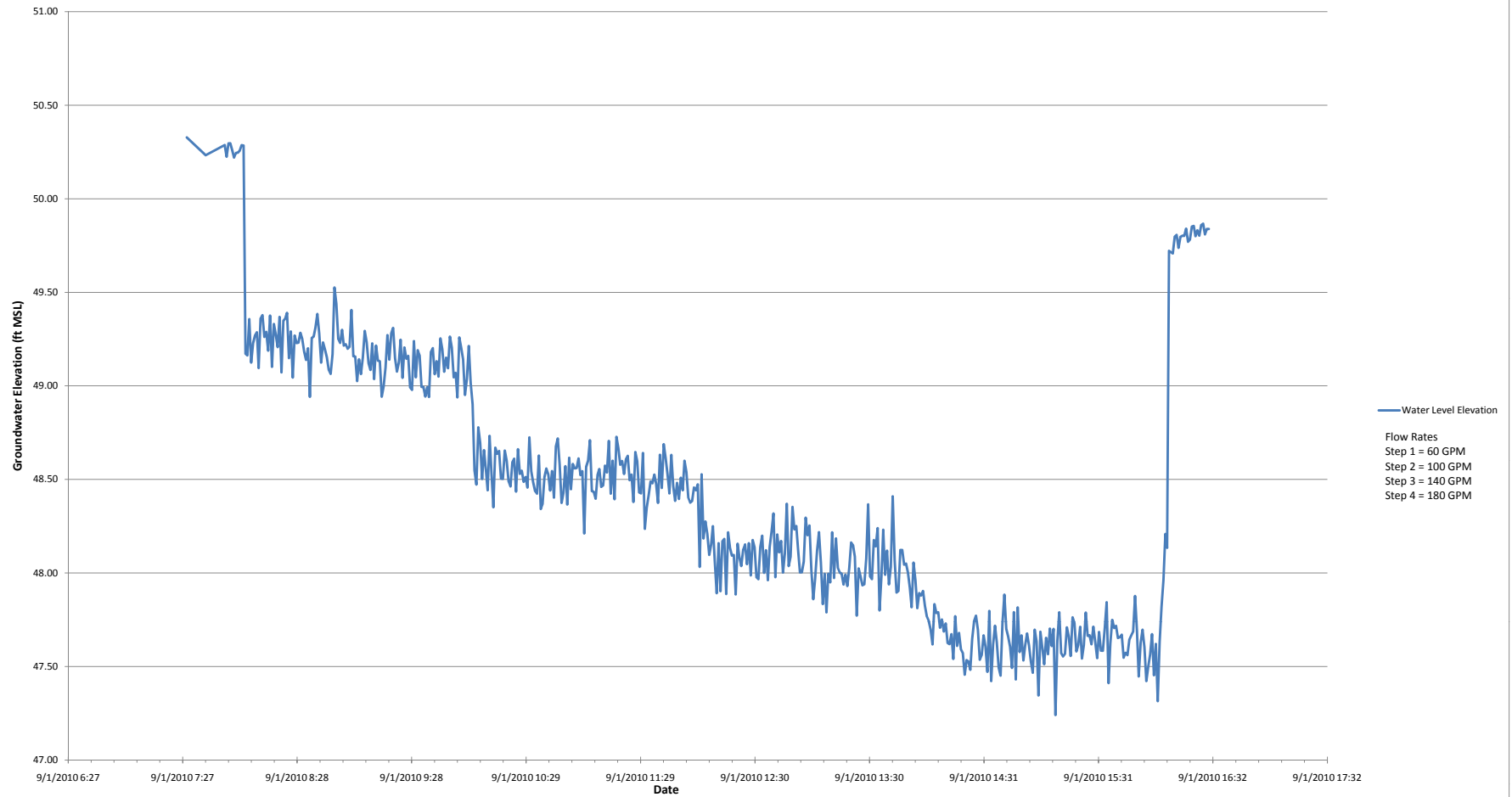
Old Roosevelt Field Site
Water Level Elevation: EW-1S, Draw Down and Recovery



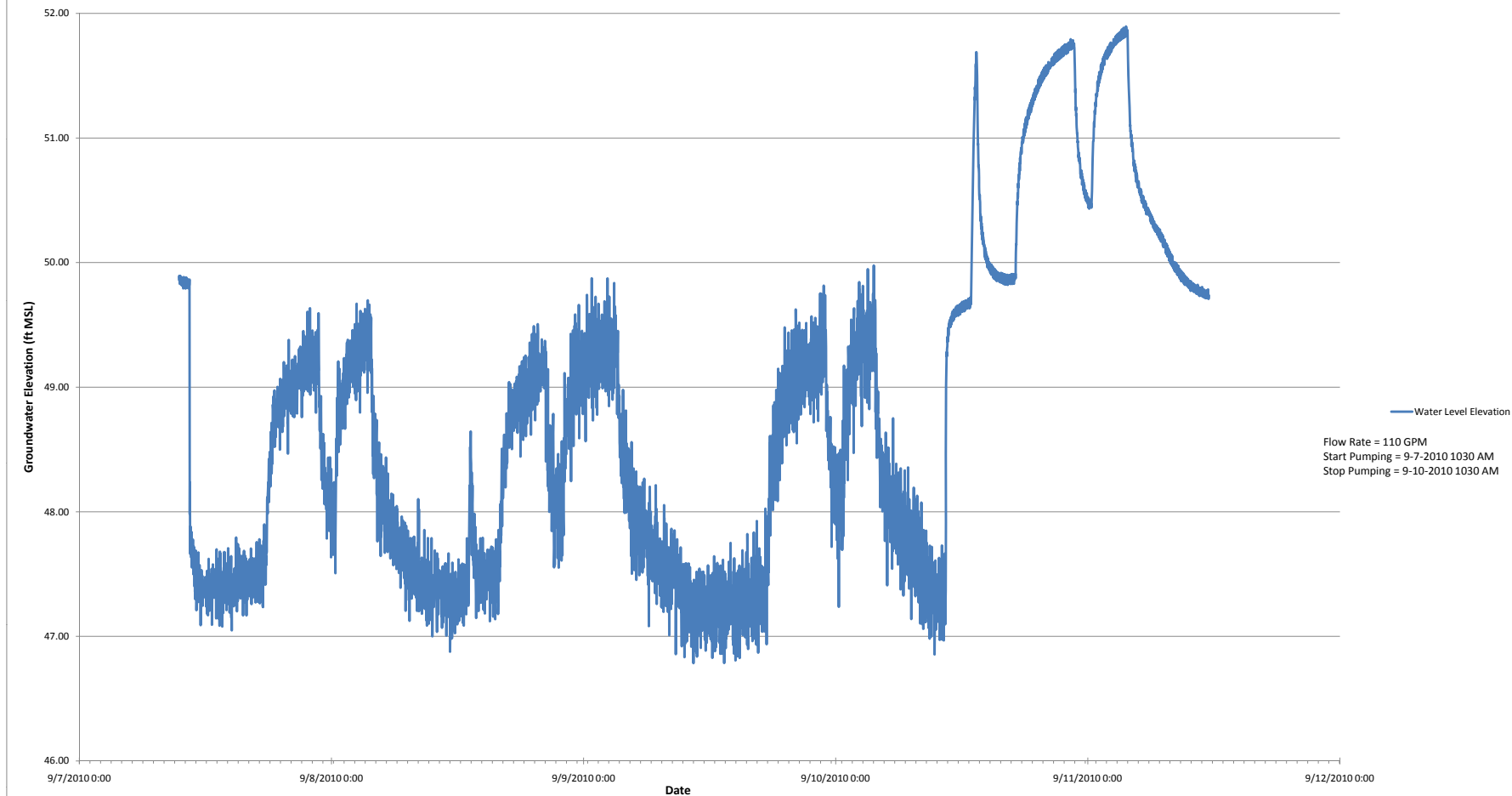
Old Roosevelt Field Site
Water Level Elevation: EW-11, All Data



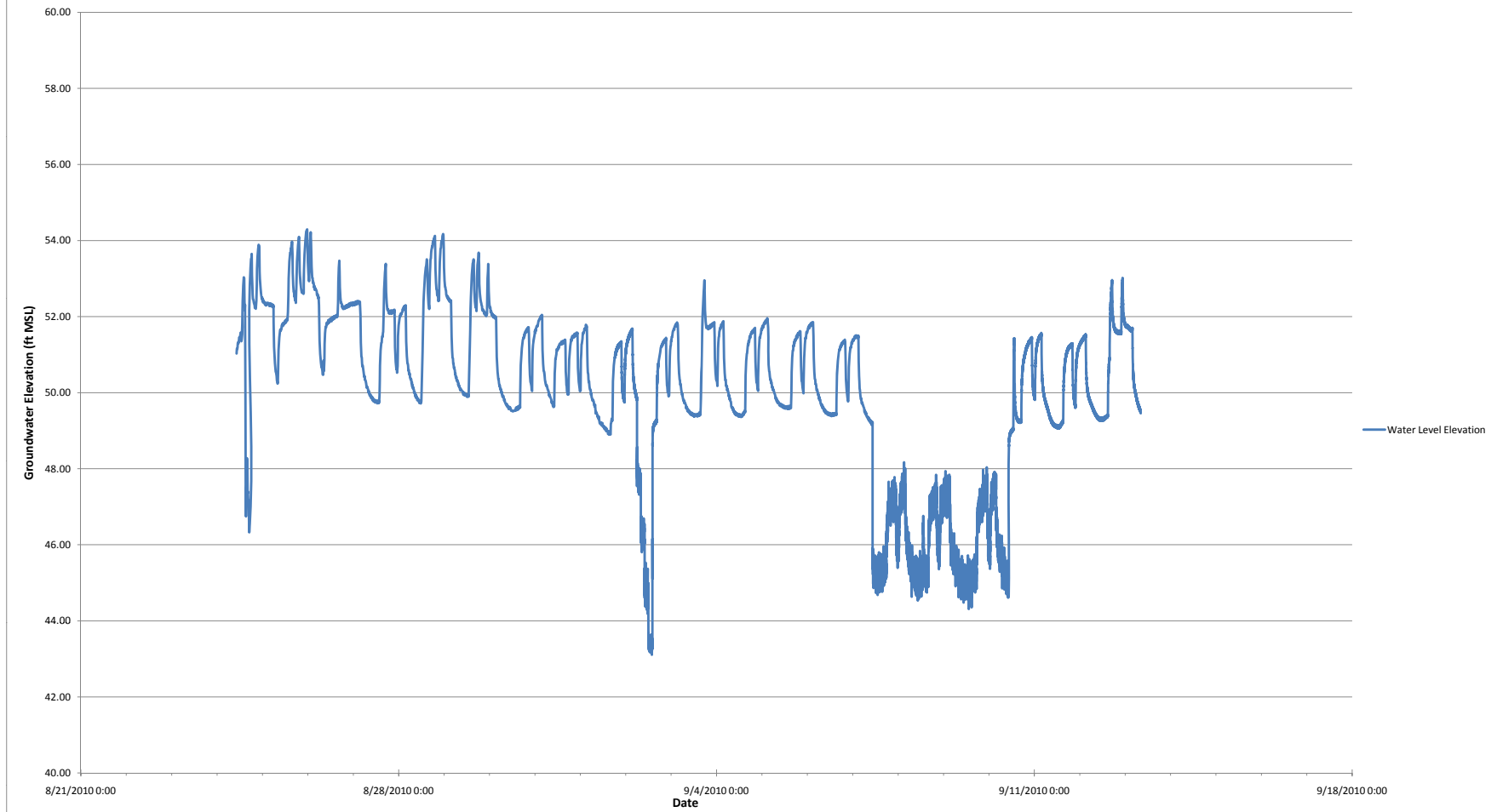
Old Roosevelt Field Site
Water Level Elevation: EW-11, Step Test



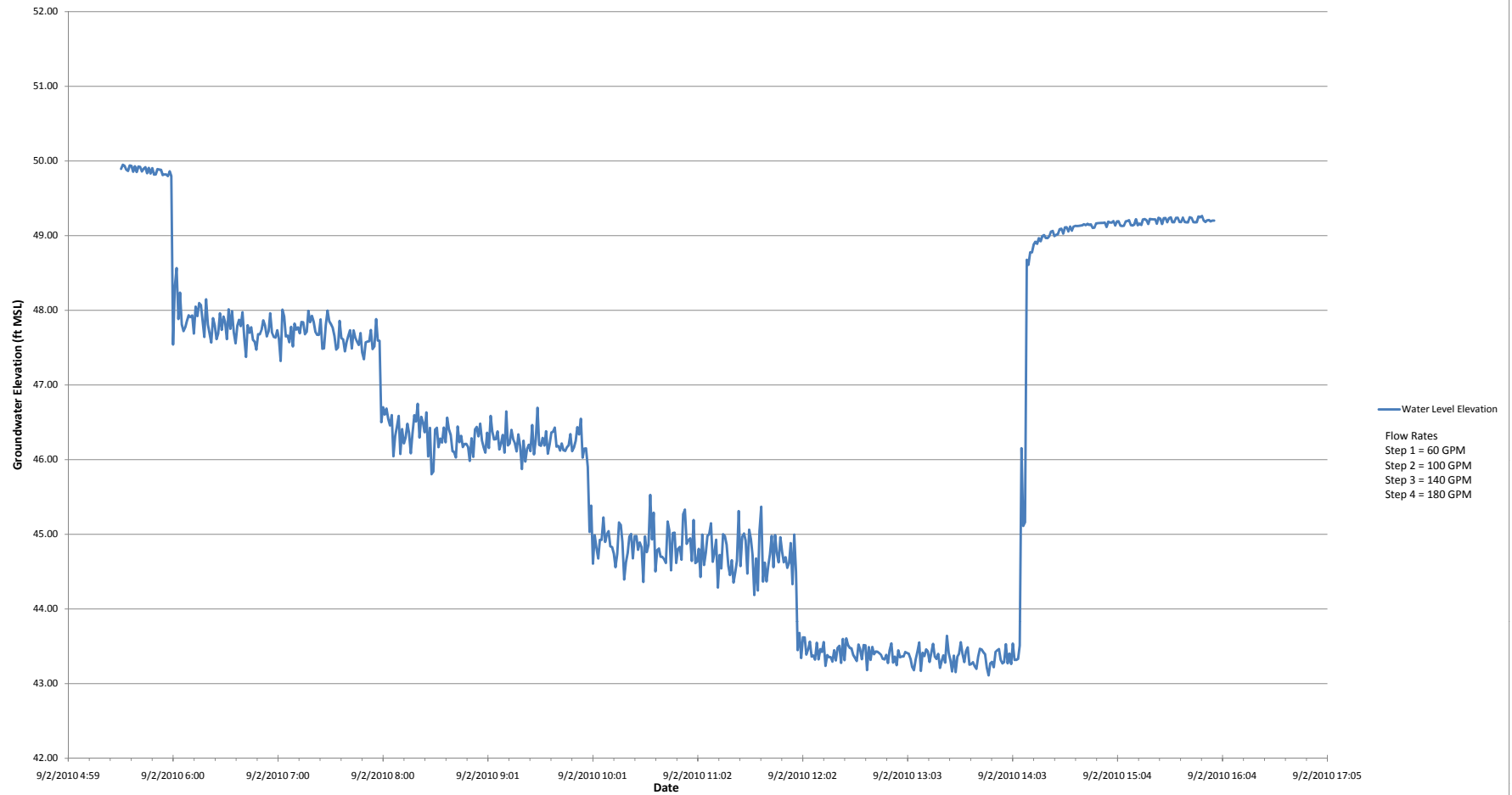
Old Roosevelt Field Site
Water Level Elevation: EW-11, Draw Down and Recovery



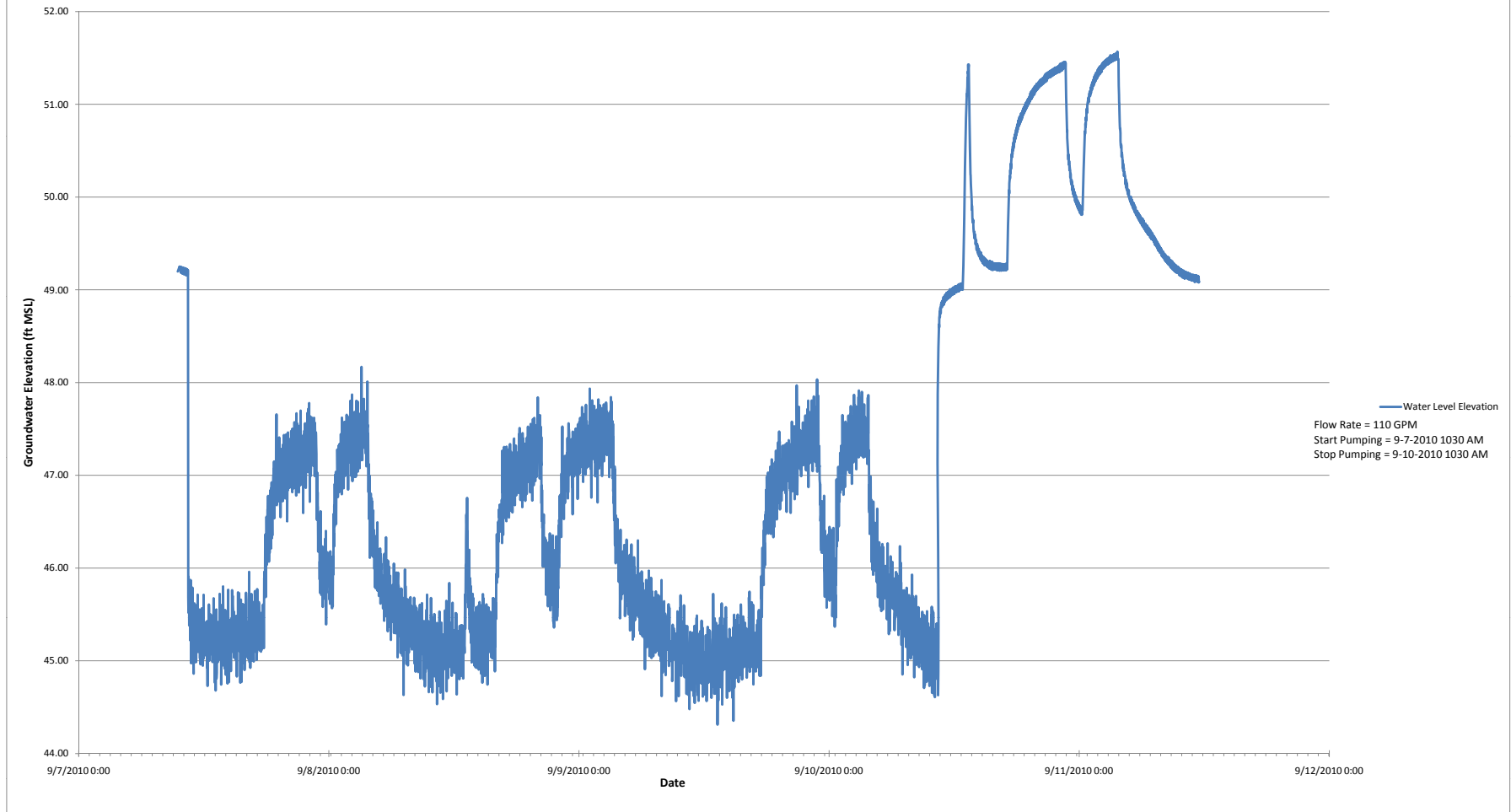
Old Roosevelt Field Site
Water Level Elevation: EW-1D, All Data



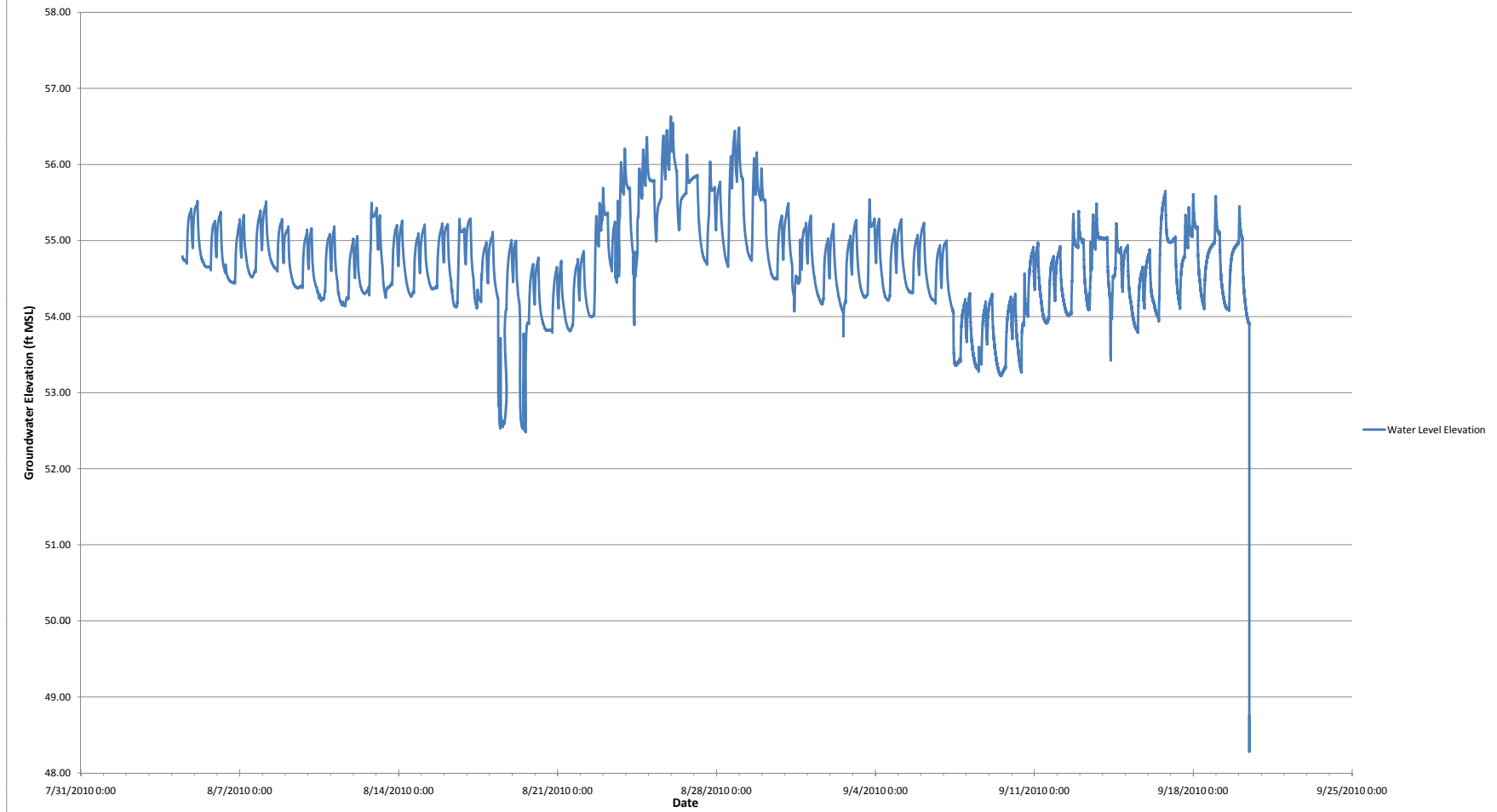
Old Roosevelt Field Site
Water Level Elevation: EW-1D, Step Test



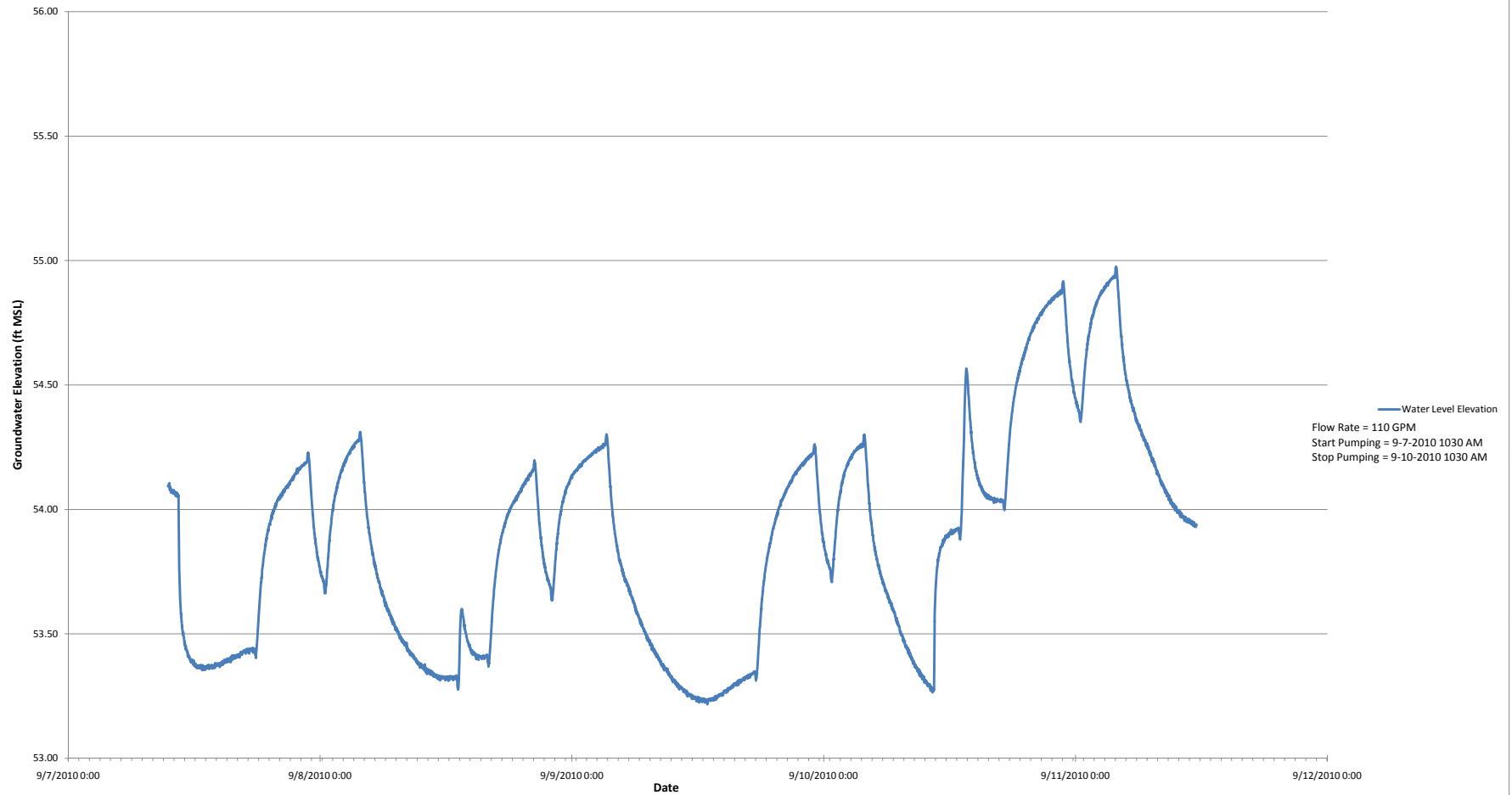
Old Roosevelt Field Site
Water Level Elevation: EW-1D, Draw Down and Recovery



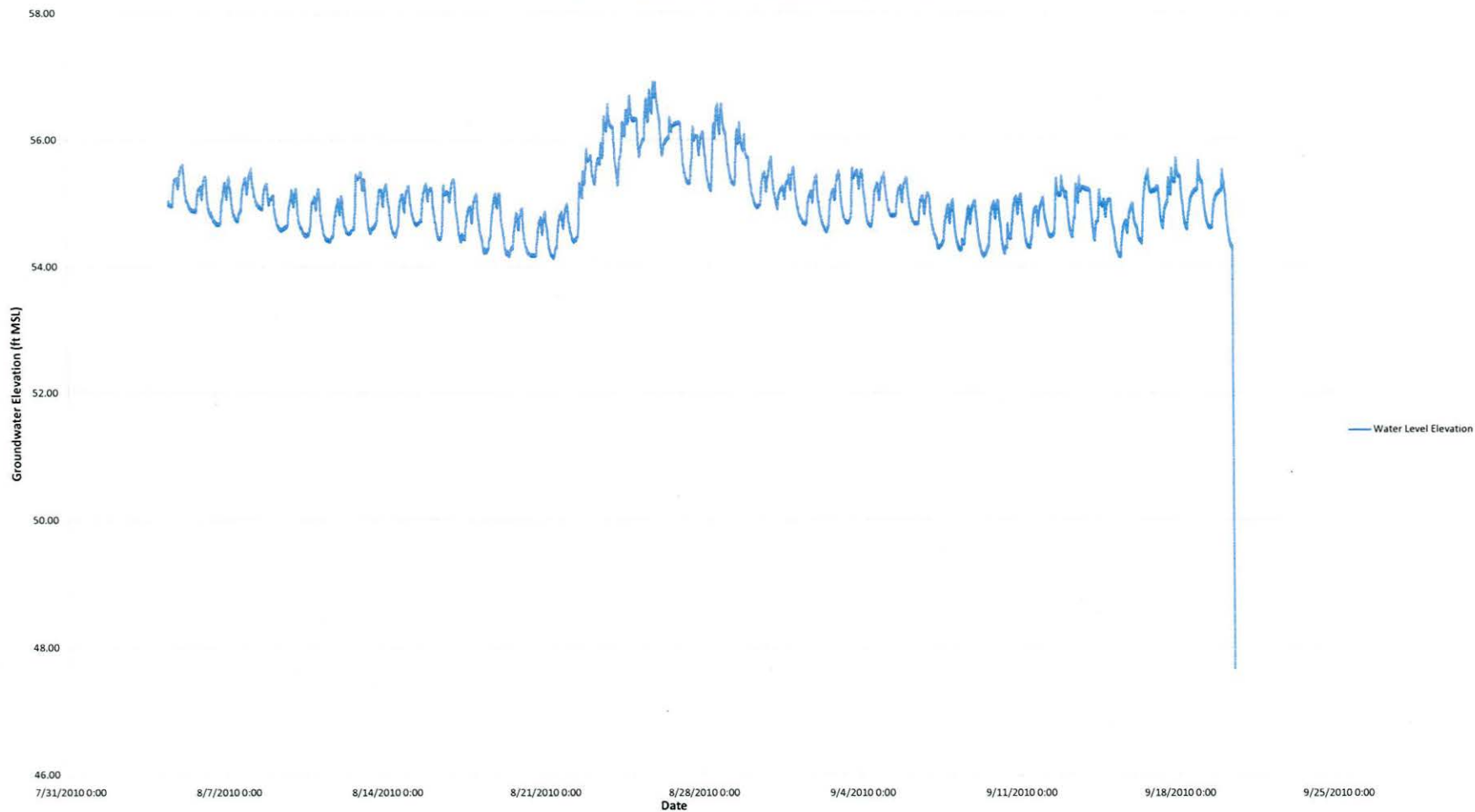
Old Roosevelt Field Site
Water Level Elevation: GWX-10019, All Data



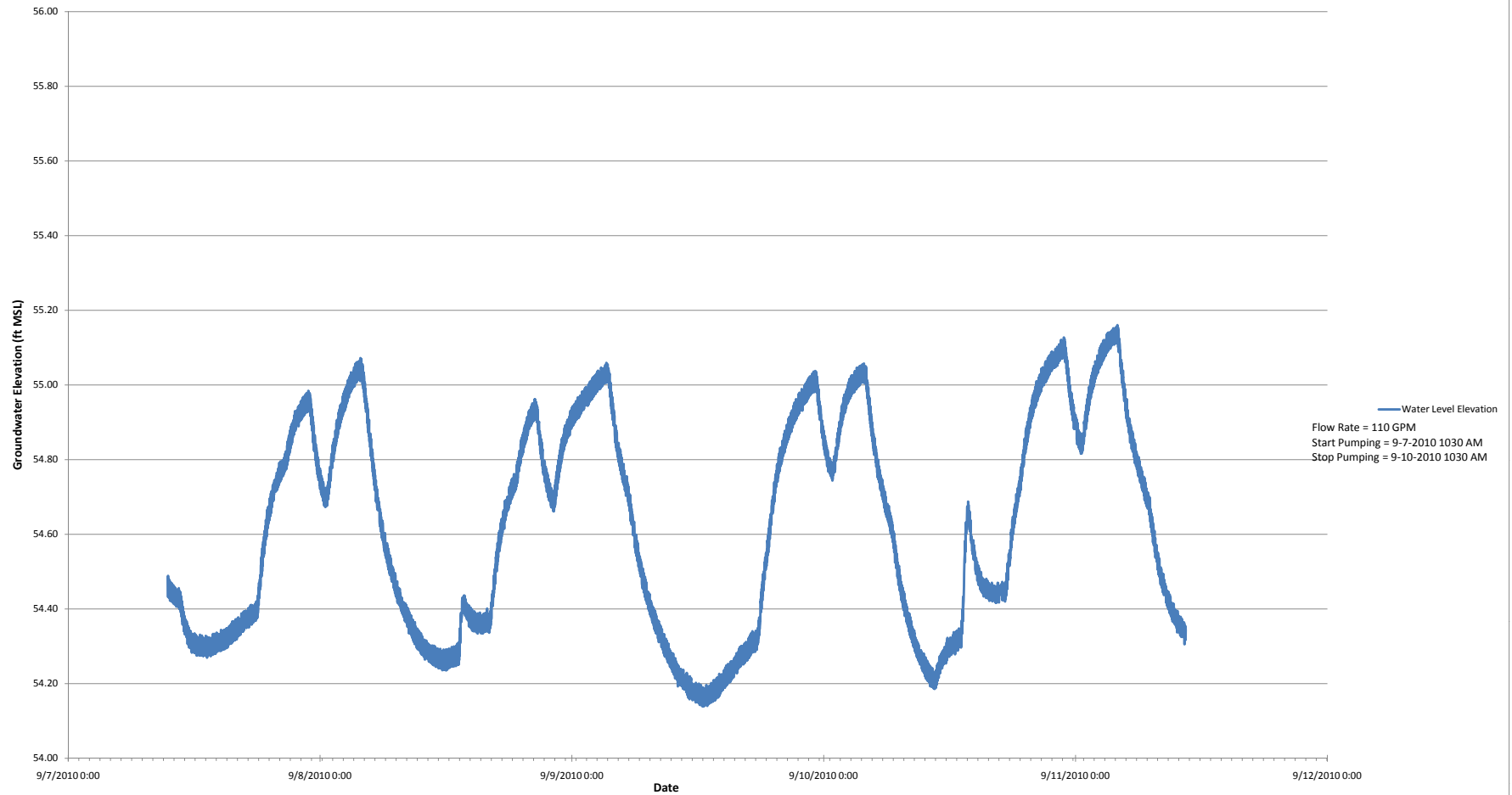
Old Roosevelt Field Site
Water Level Elevation: GWX-10019, Draw Down and Recovery



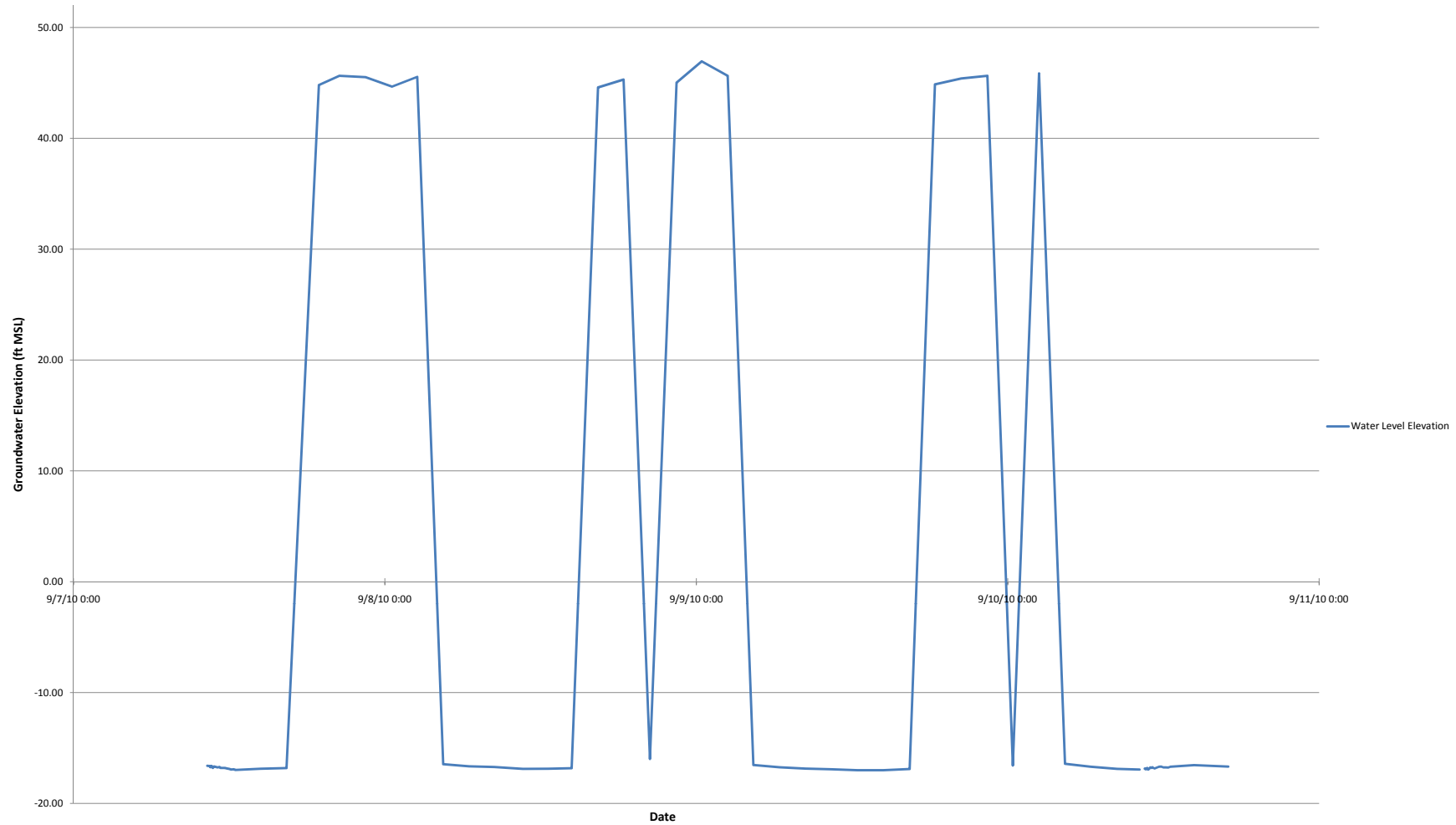
Old Roosevelt Field Site
Water Level Elevation: GWX-10020, All Data



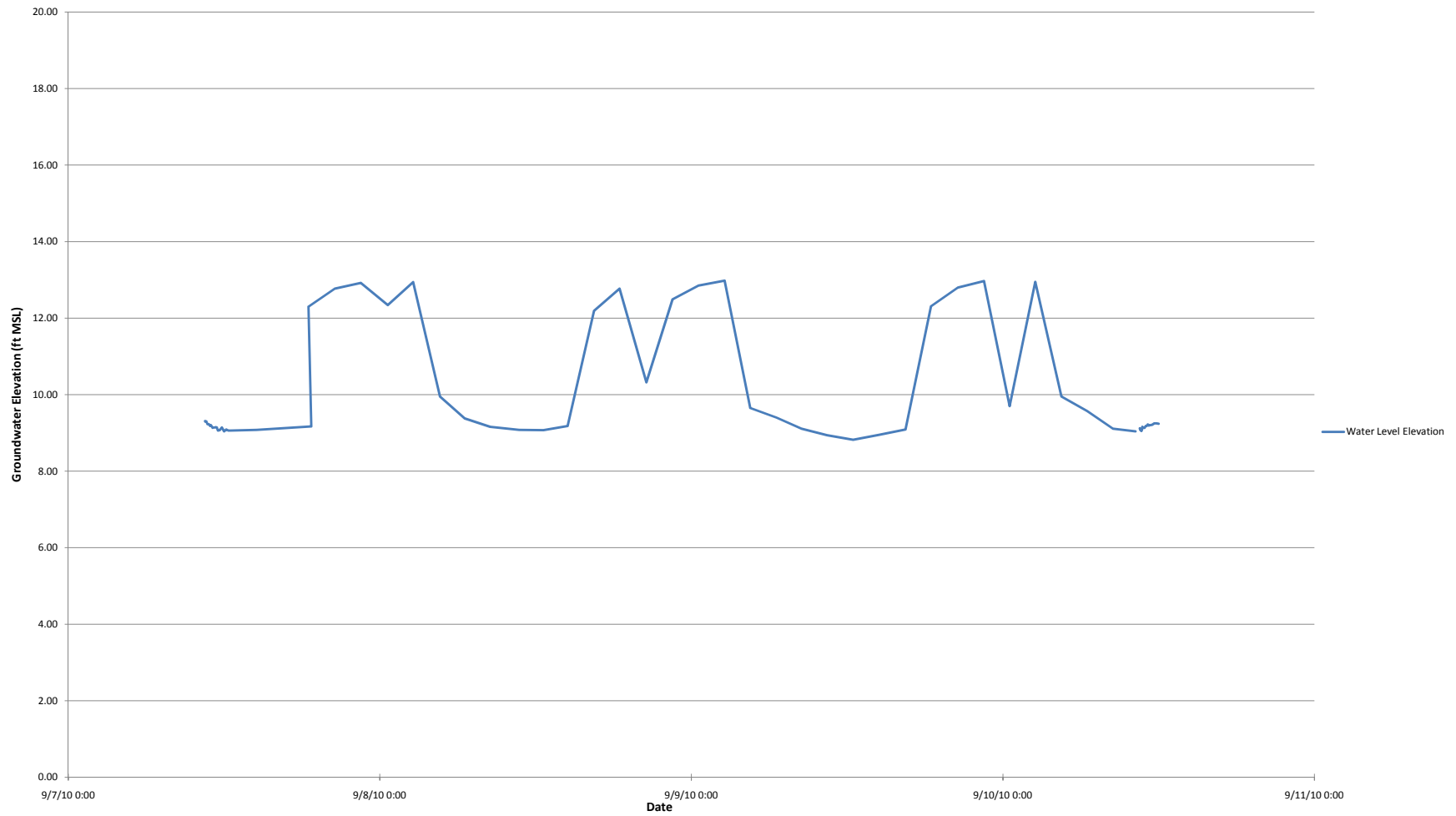
Old Roosevelt Field Site
Water Level Elevation: GWX-10020, Draw Down and Recovery



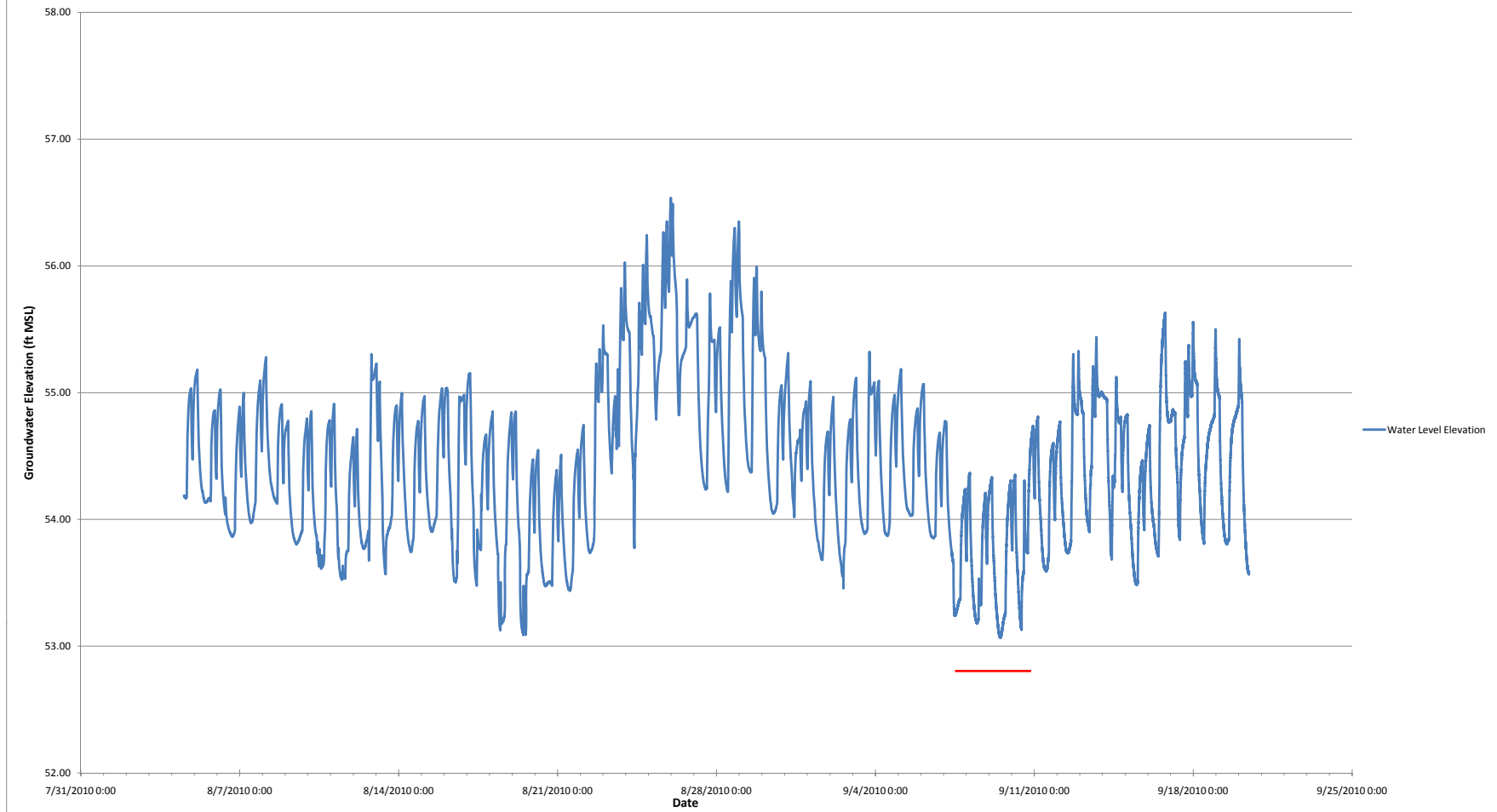
Old Roosevelt Field Site
Water Level Elevation: GWP-10, All Data



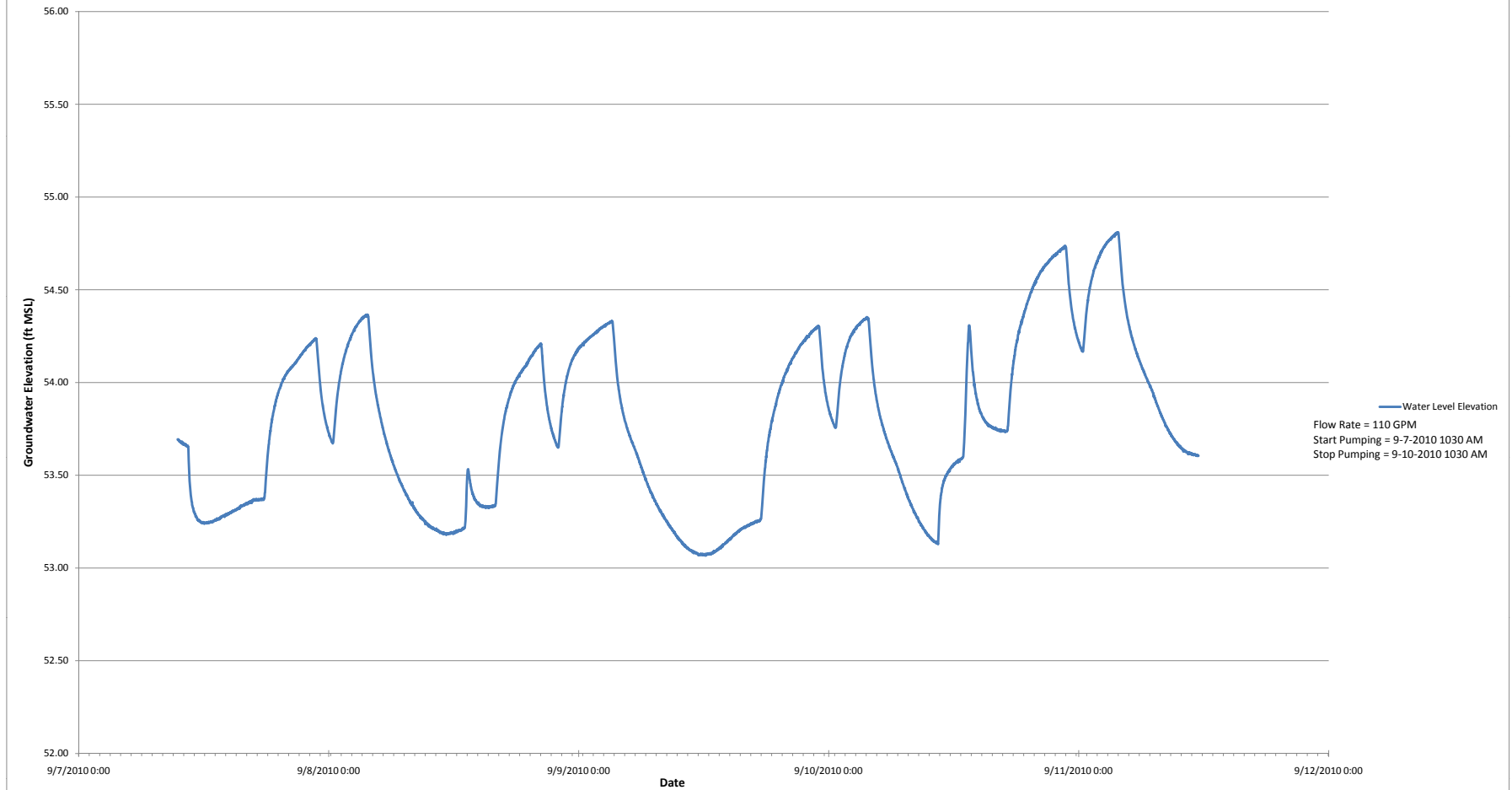
Old Roosevelt Field Site
Water Level Elevation: GWP-11, All Data



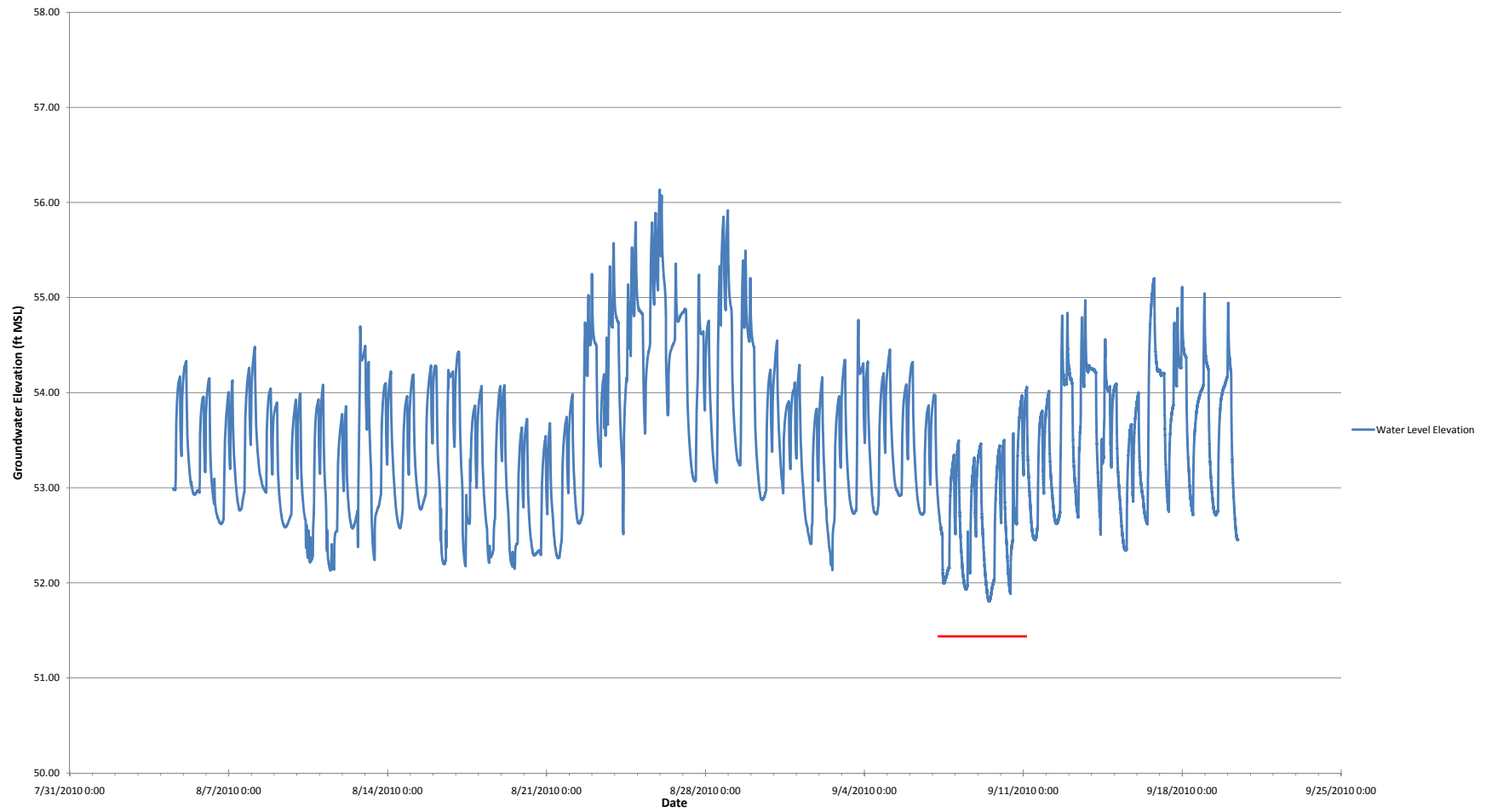
Old Roosevelt Field Site
Water Level Elevation: MW-1S, All Data



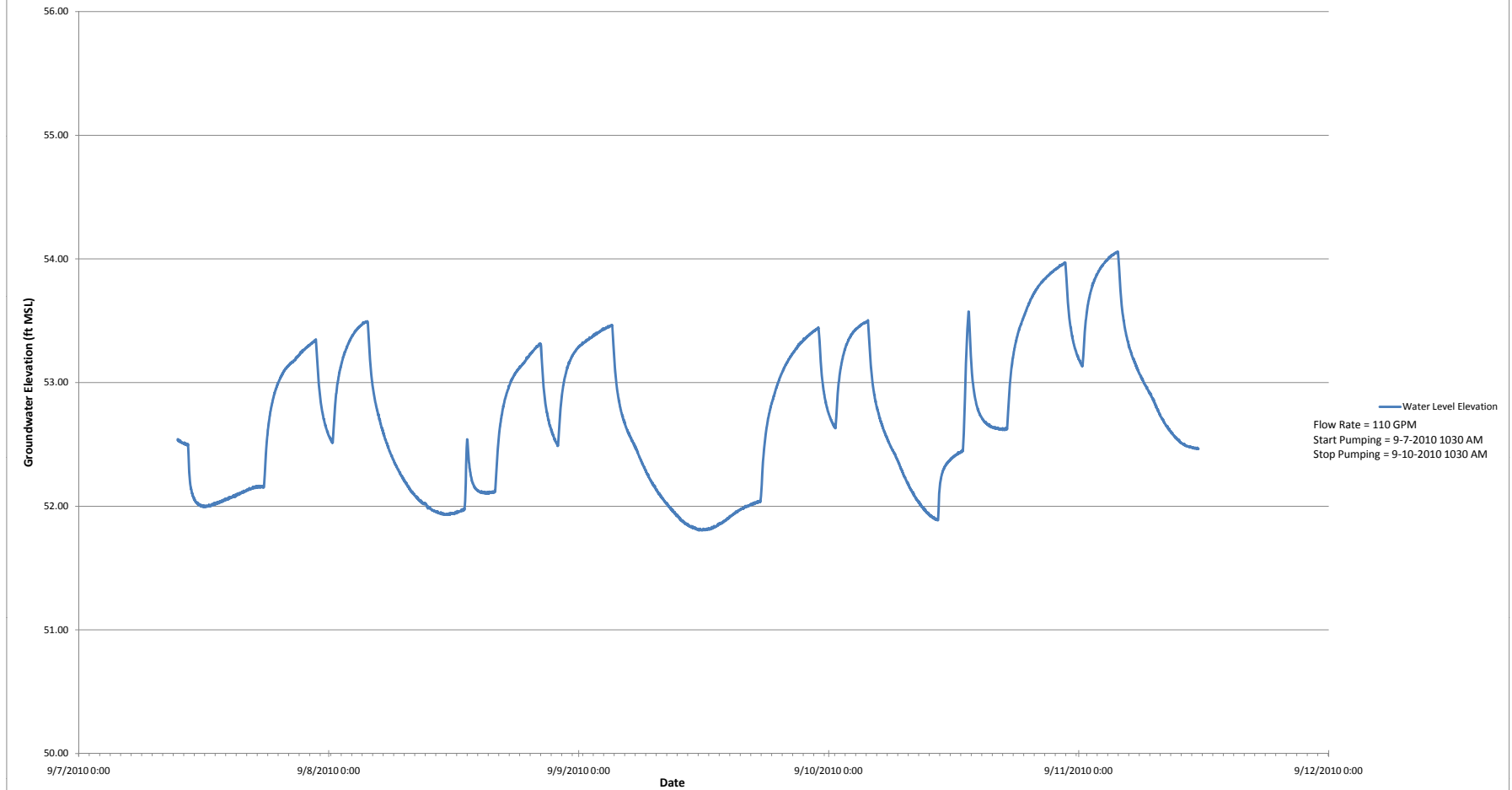
Old Roosevelt Field Site
Water Level Elevation: MW-1S, Draw Down and Recovery



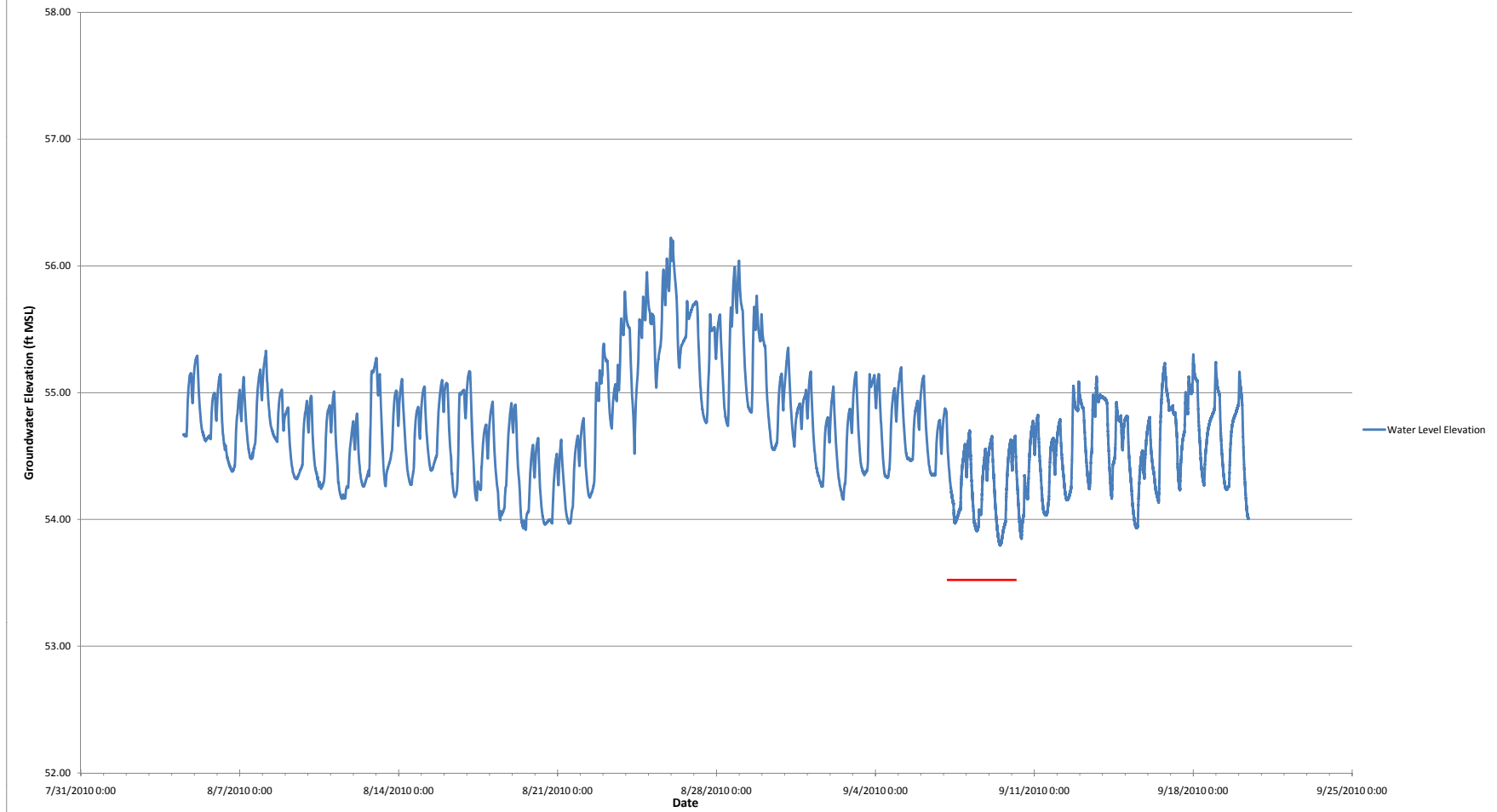
Old Roosevelt Field Site
Water Level Elevation: MW-1I, All Data



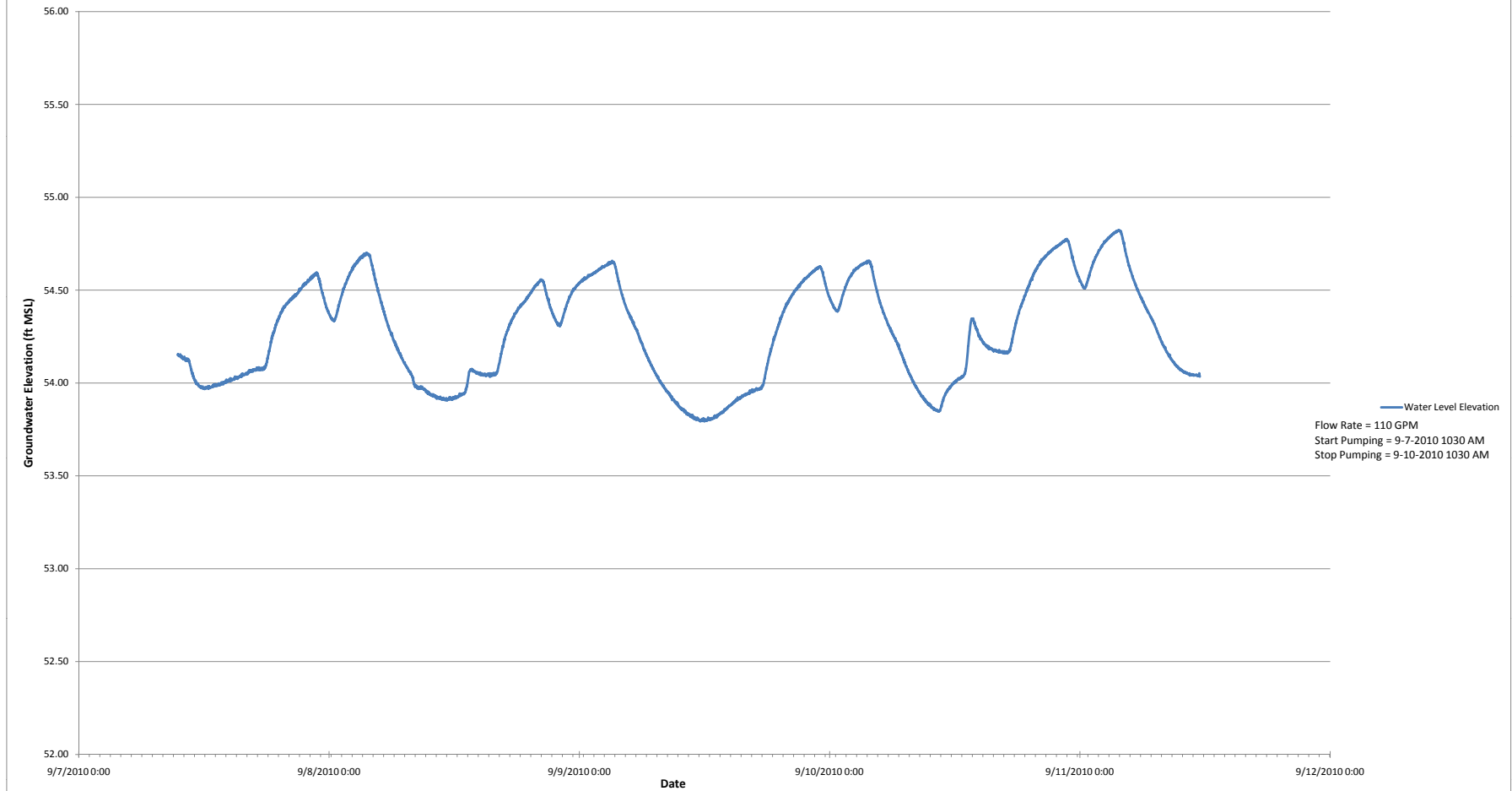
Old Roosevelt Field Site
Water Level Elevation: MW-1I, Draw Down and Recovery



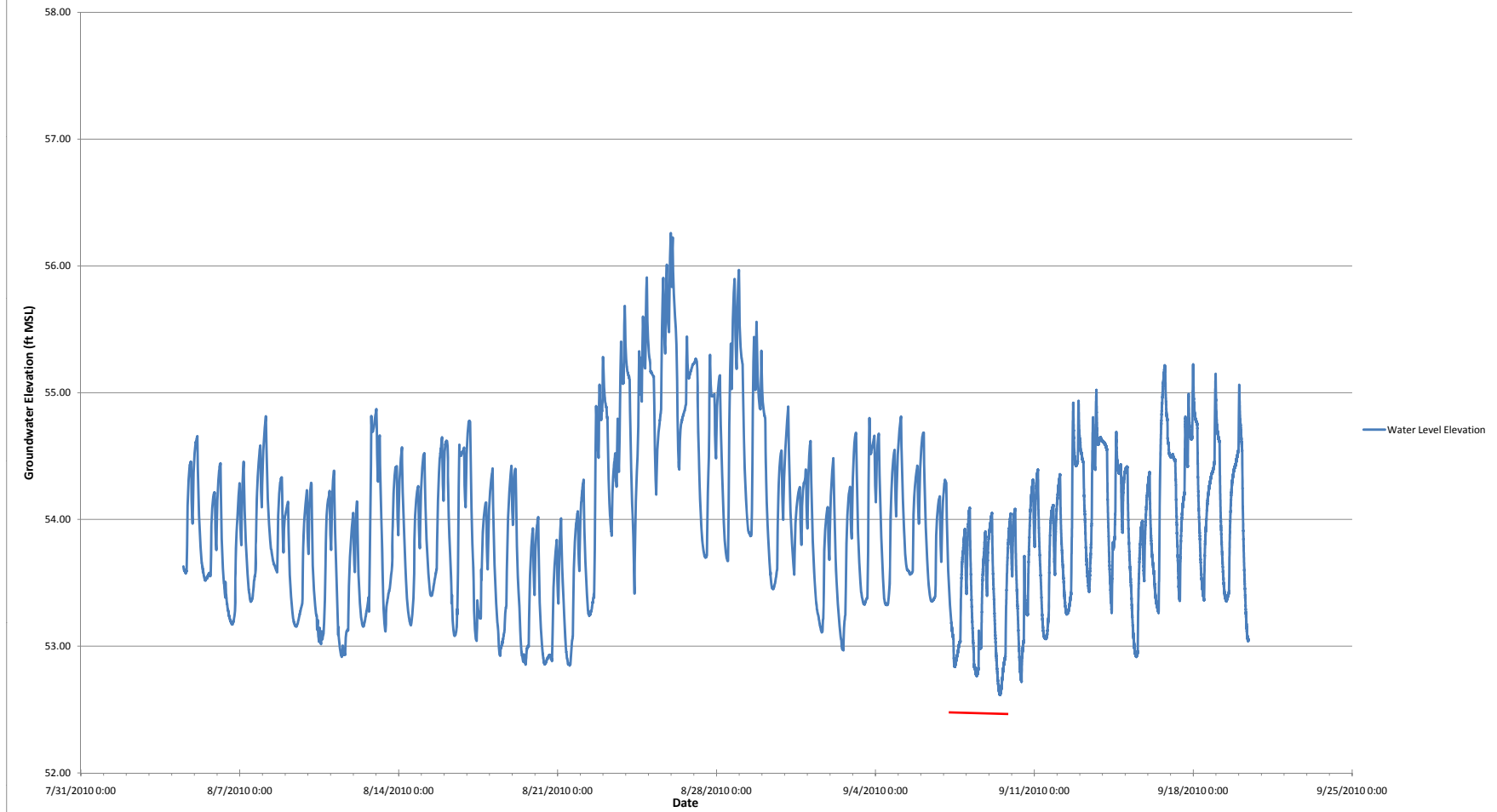
Old Roosevelt Field Site
Water Level Elevation: MW-2S, All Data



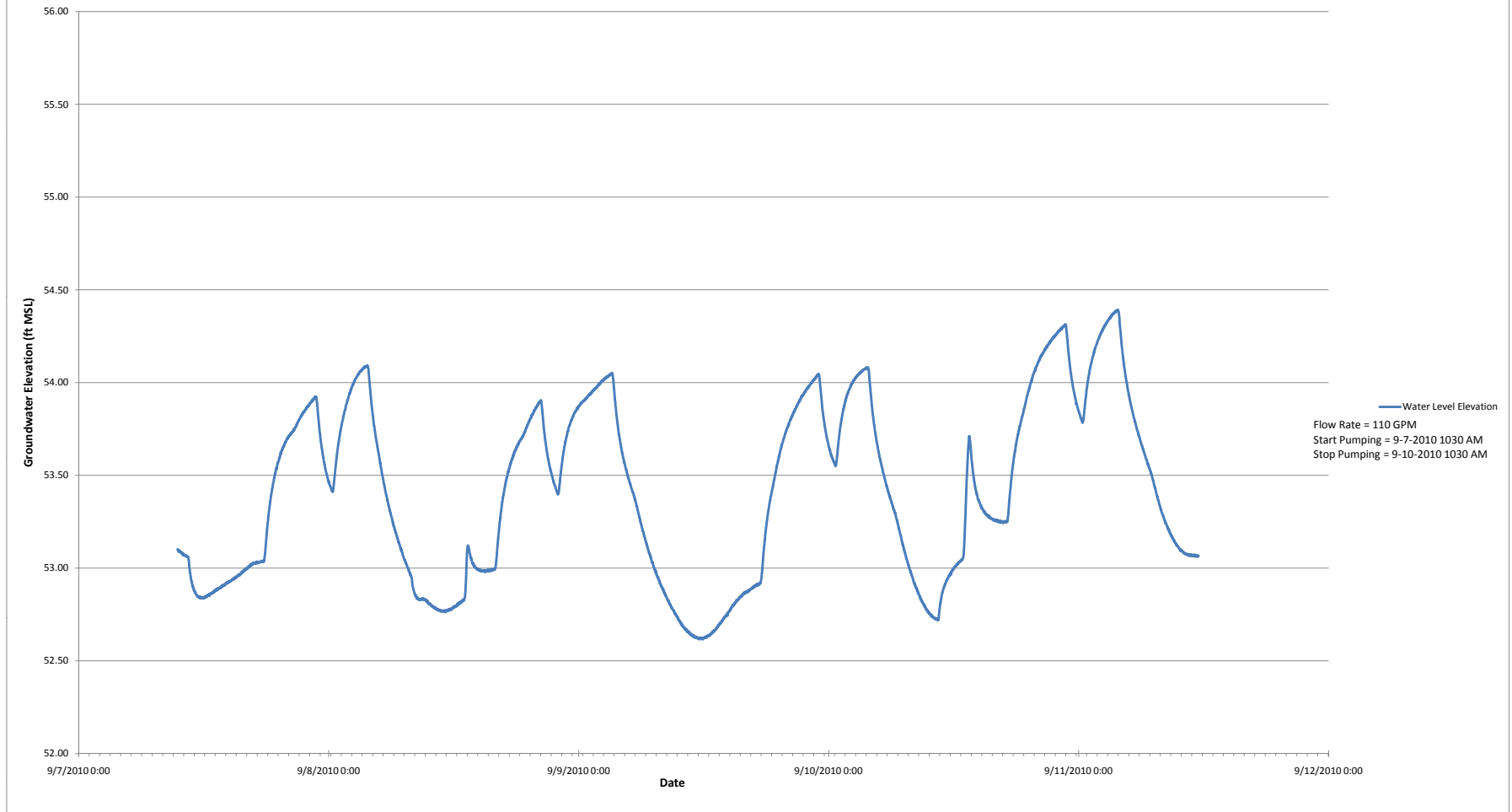
Old Roosevelt Field Site
Water Level Elevation: MW-2S, Draw Down and Recovery



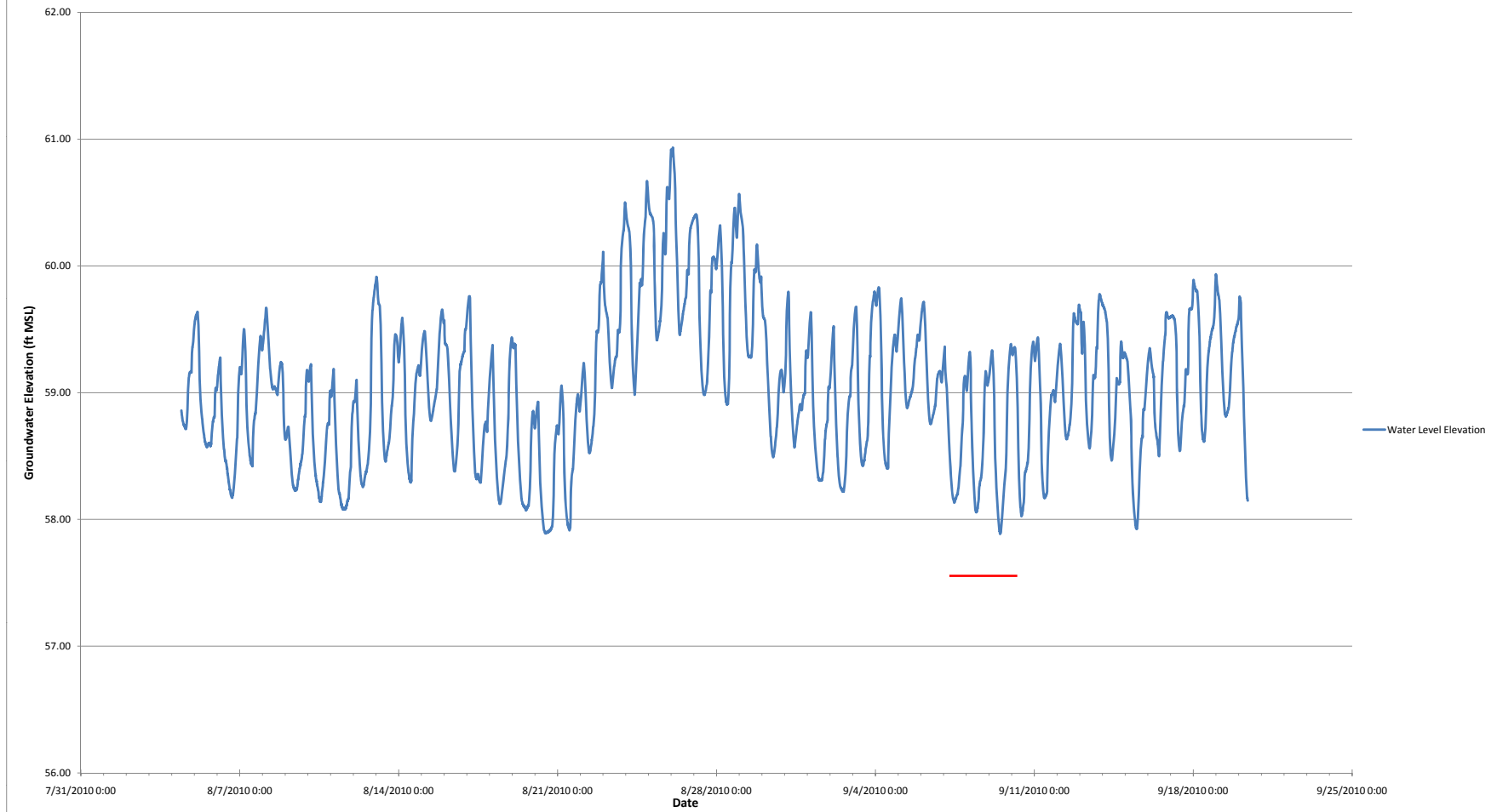
Old Roosevelt Field Site
Water Level Elevation: MW-2I, All Data



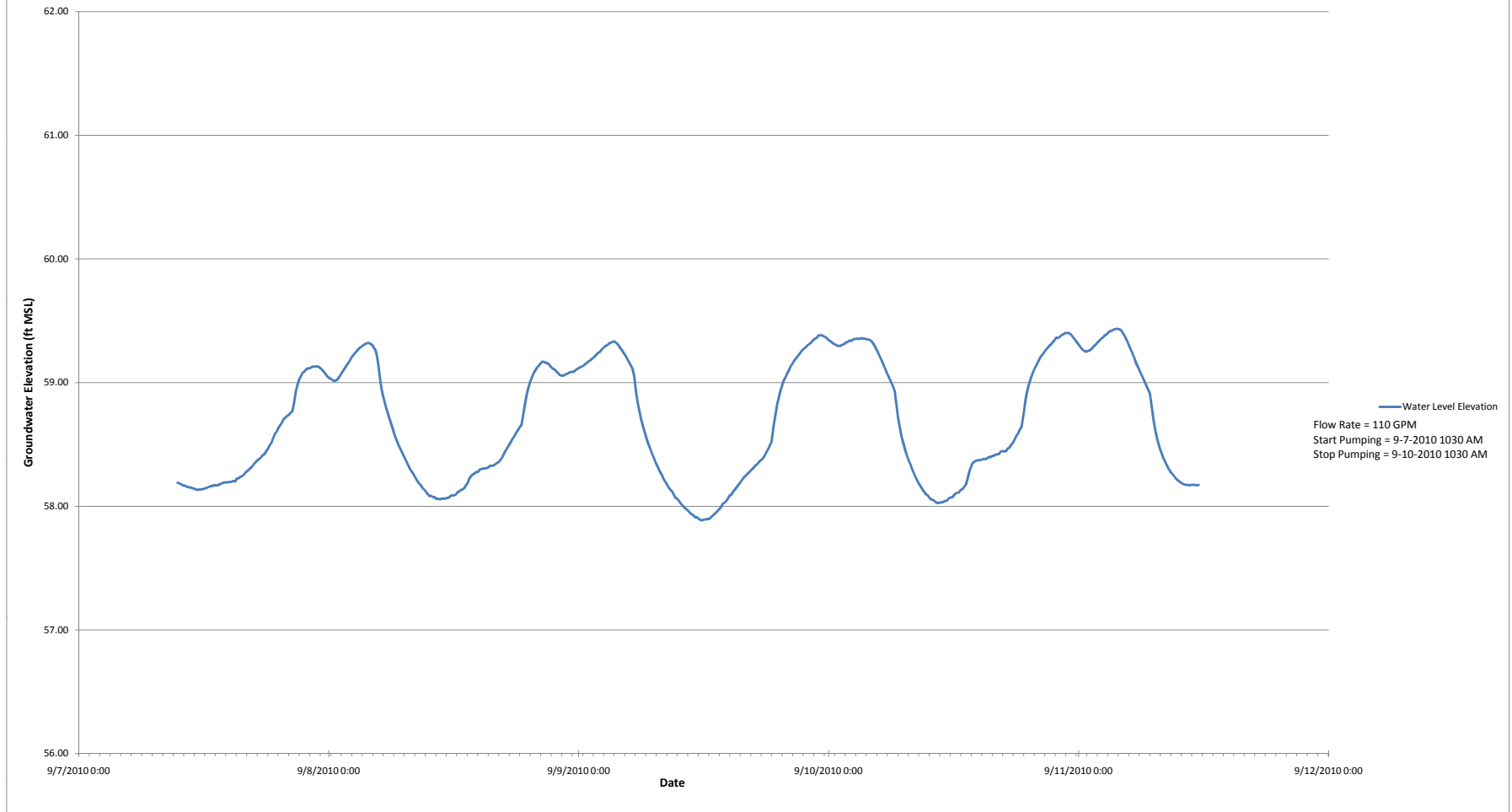
Old Roosevelt Field Site
Water Level Elevation: MW-2I, Draw Down and Recovery



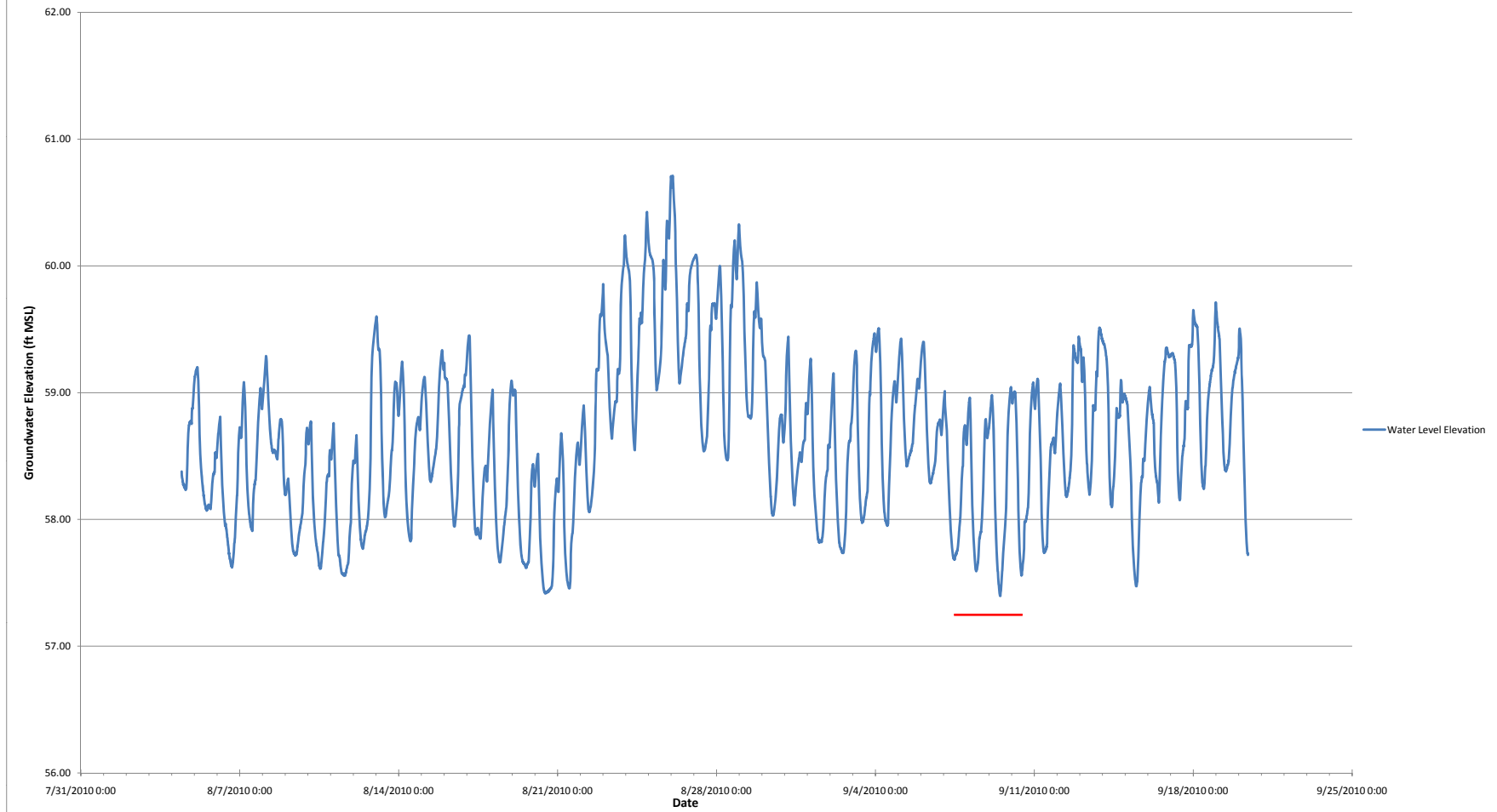
Old Roosevelt Field Site
Water Level Elevation: MW-3S, All Data



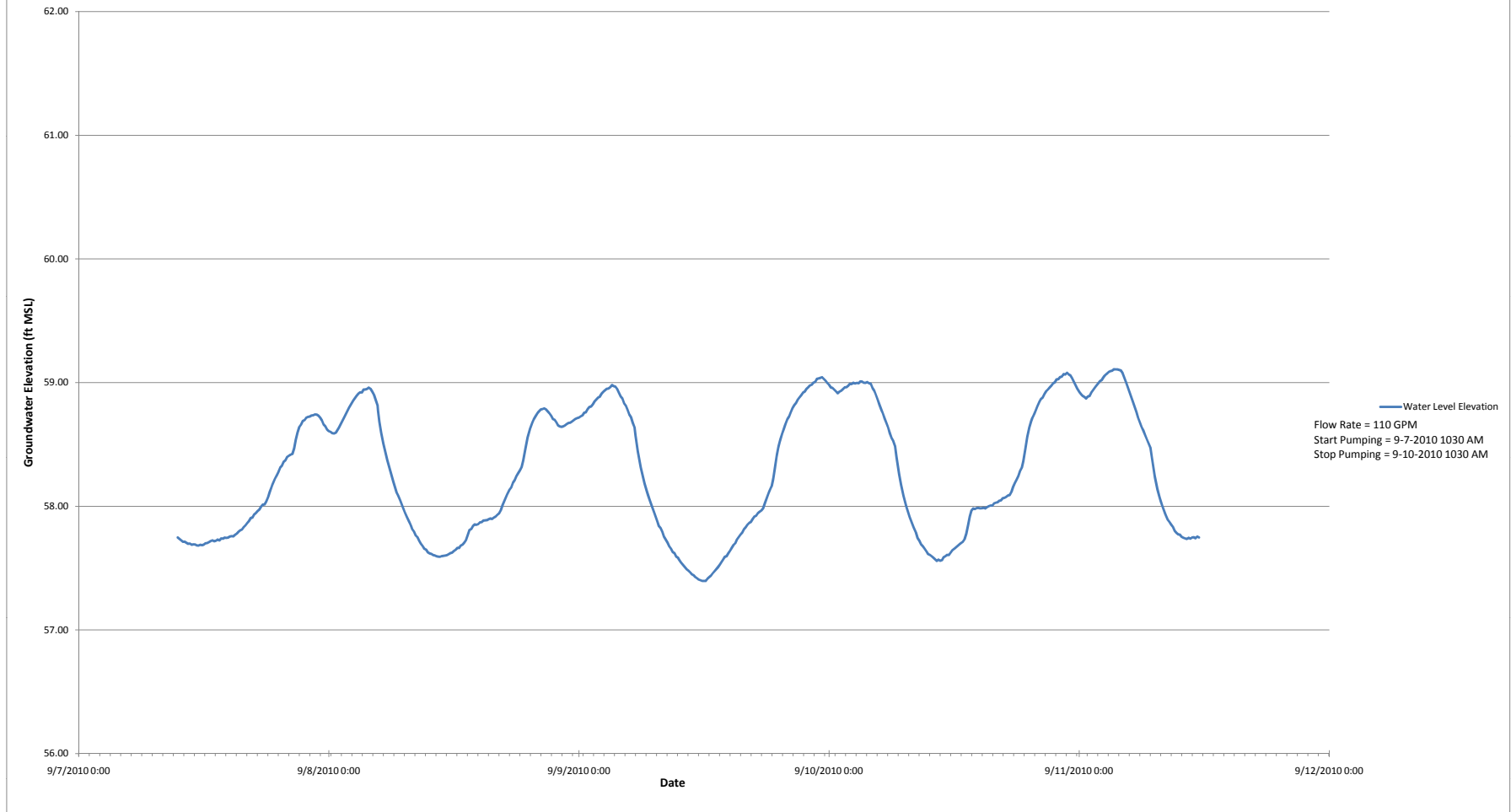
Old Roosevelt Field Site
Water Level Elevation: MW-3S, Draw Down and Recovery



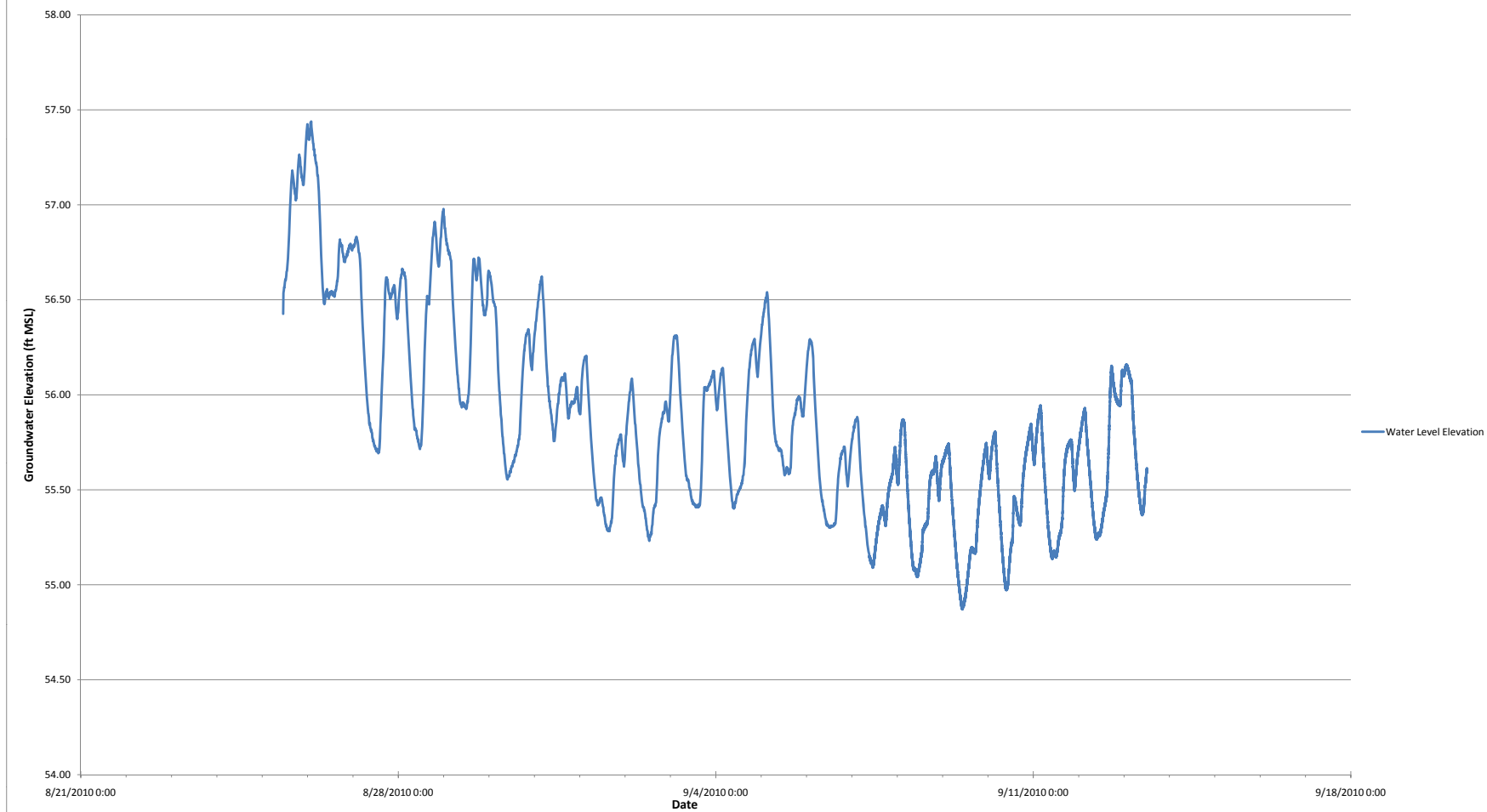
Old Roosevelt Field Site
Water Level Elevation: MW-3I, All Data



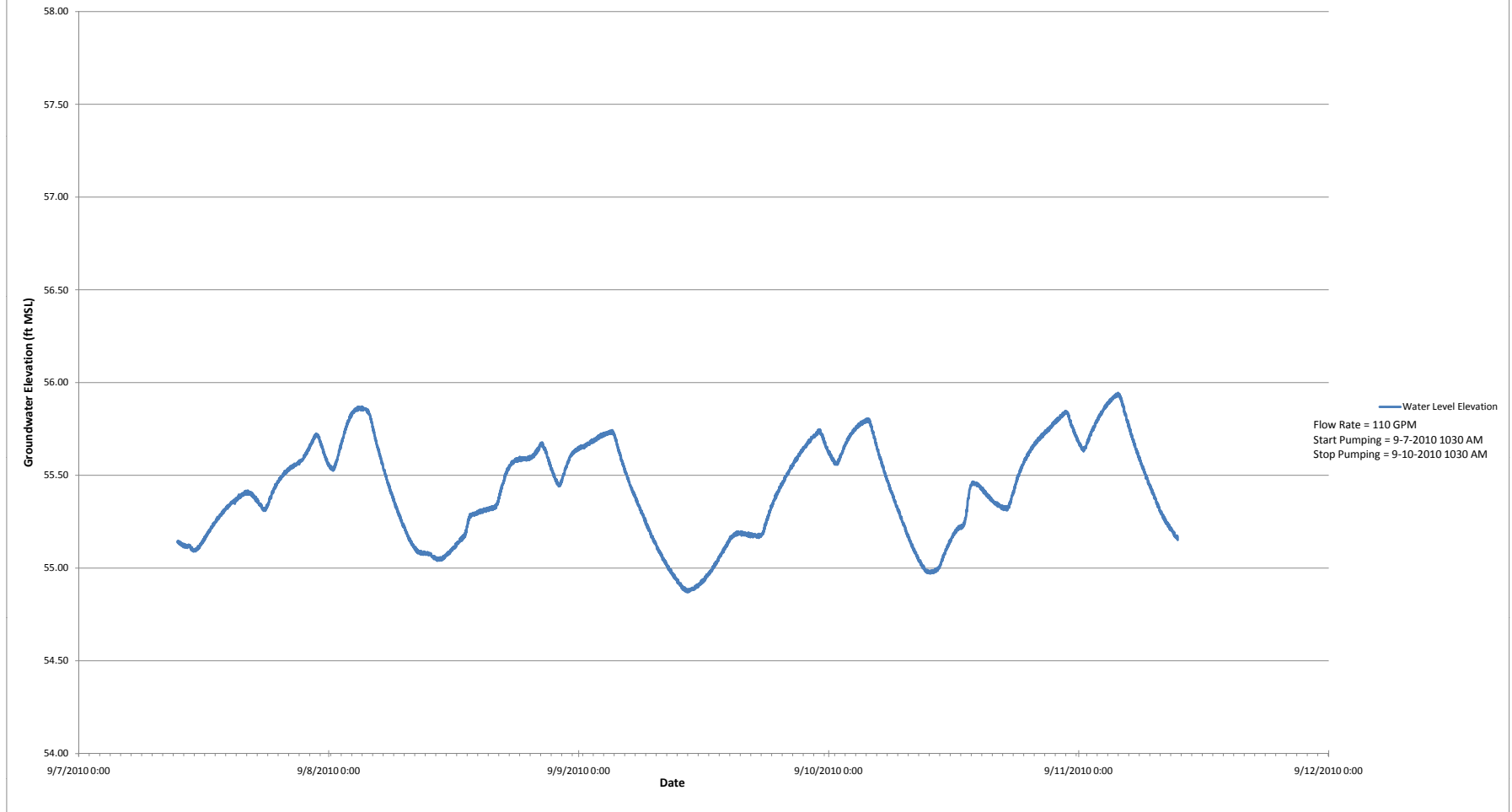
Old Roosevelt Field Site
Water Level Elevation: MW-3I, Draw Down and Recovery



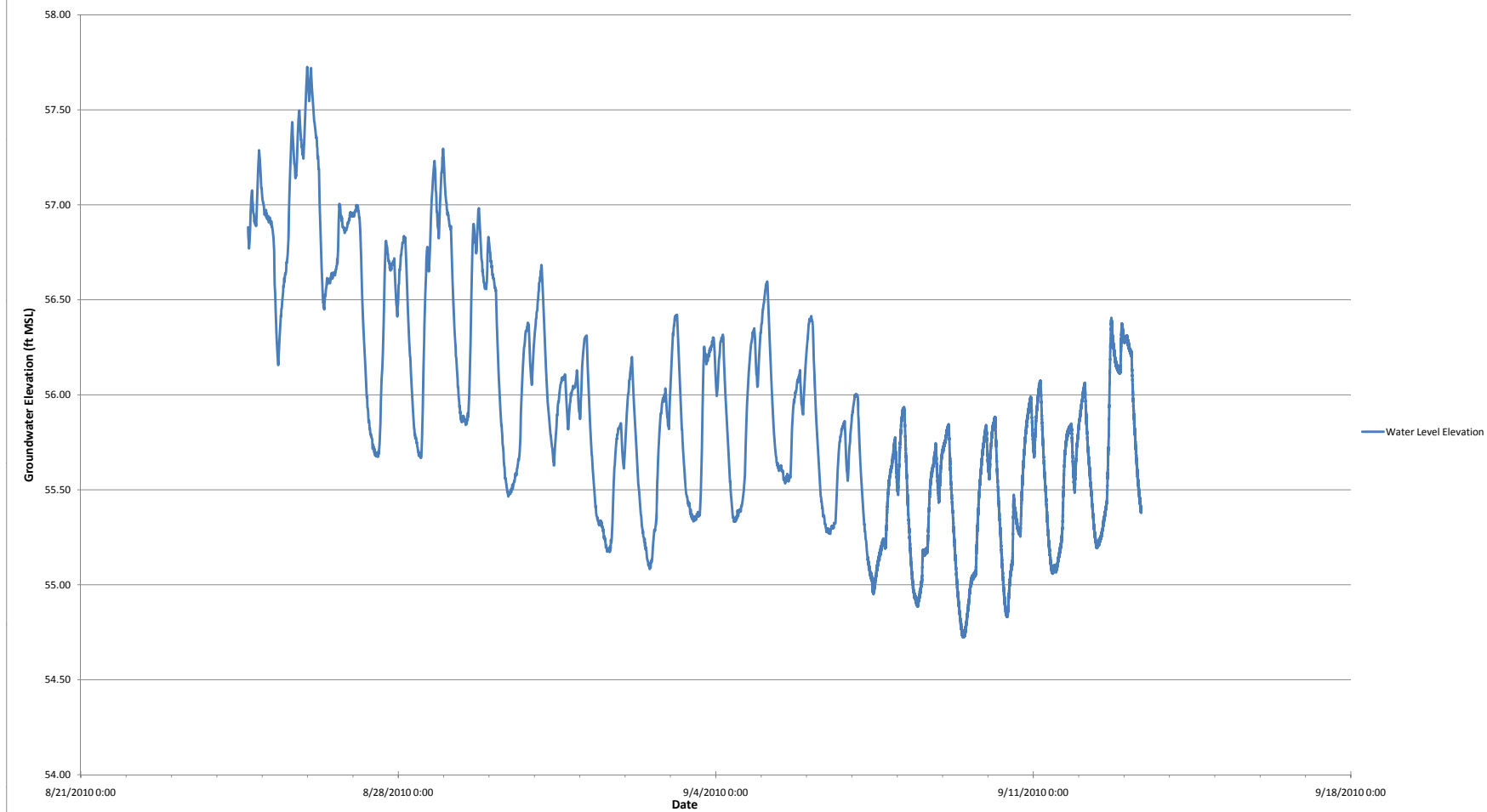
Old Roosevelt Field Site
Water Level Elevation: SVP-2, All Data



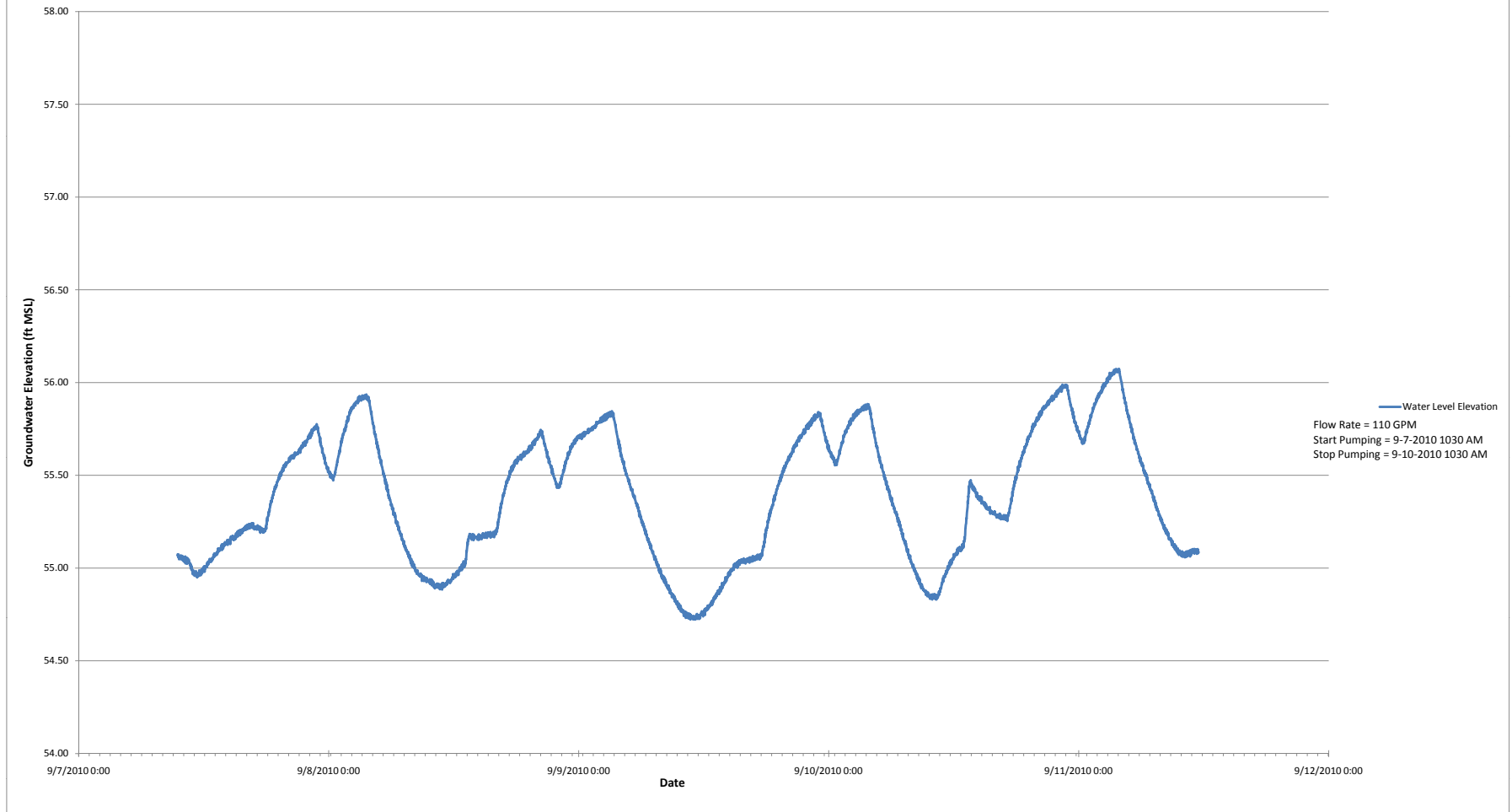
Old Roosevelt Field Site
Water Level Elevation: SVP-2, Draw Down and Recovery



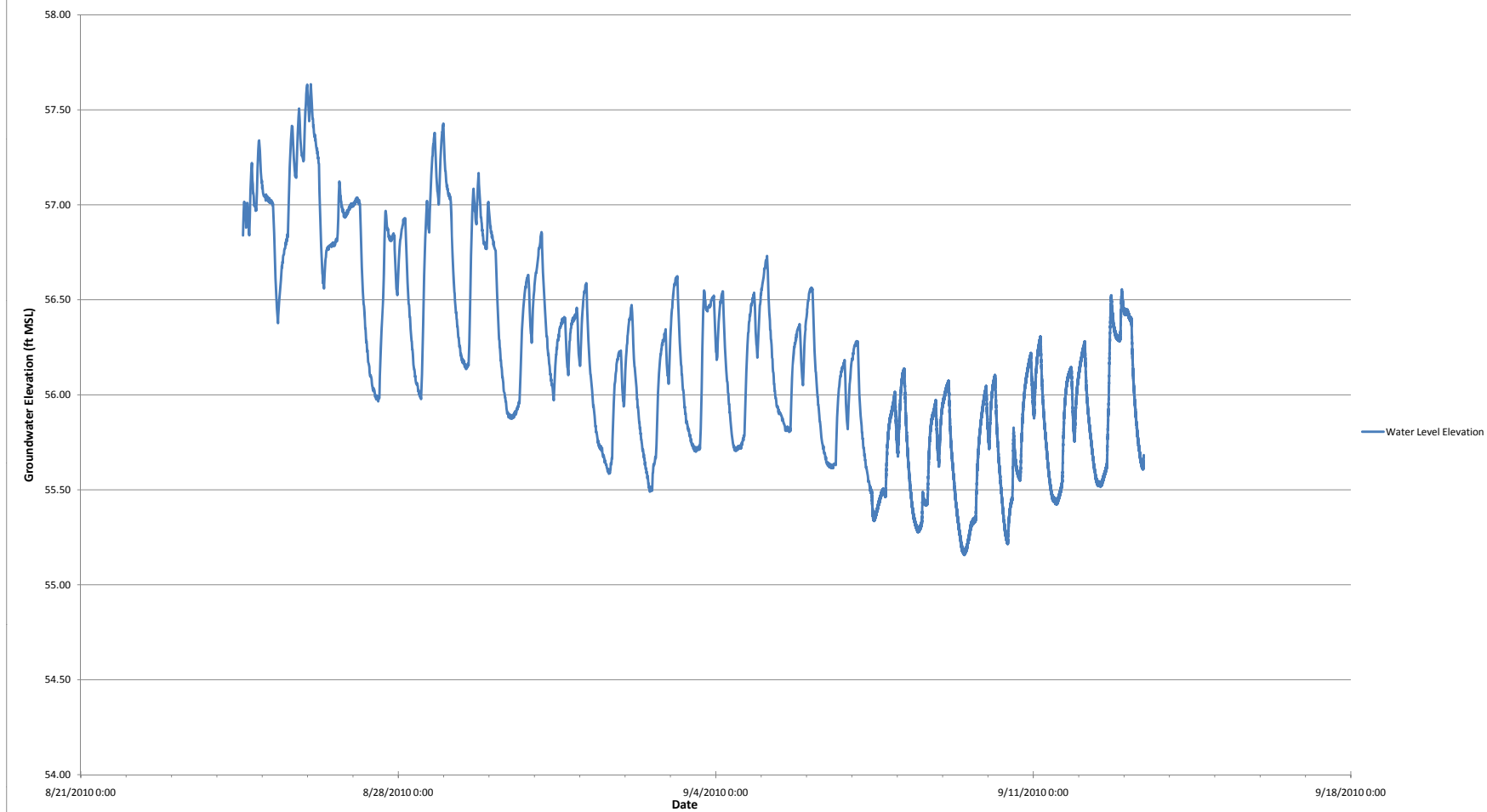
Old Roosevelt Field Site
Water Level Elevation: SVP-3, All Data



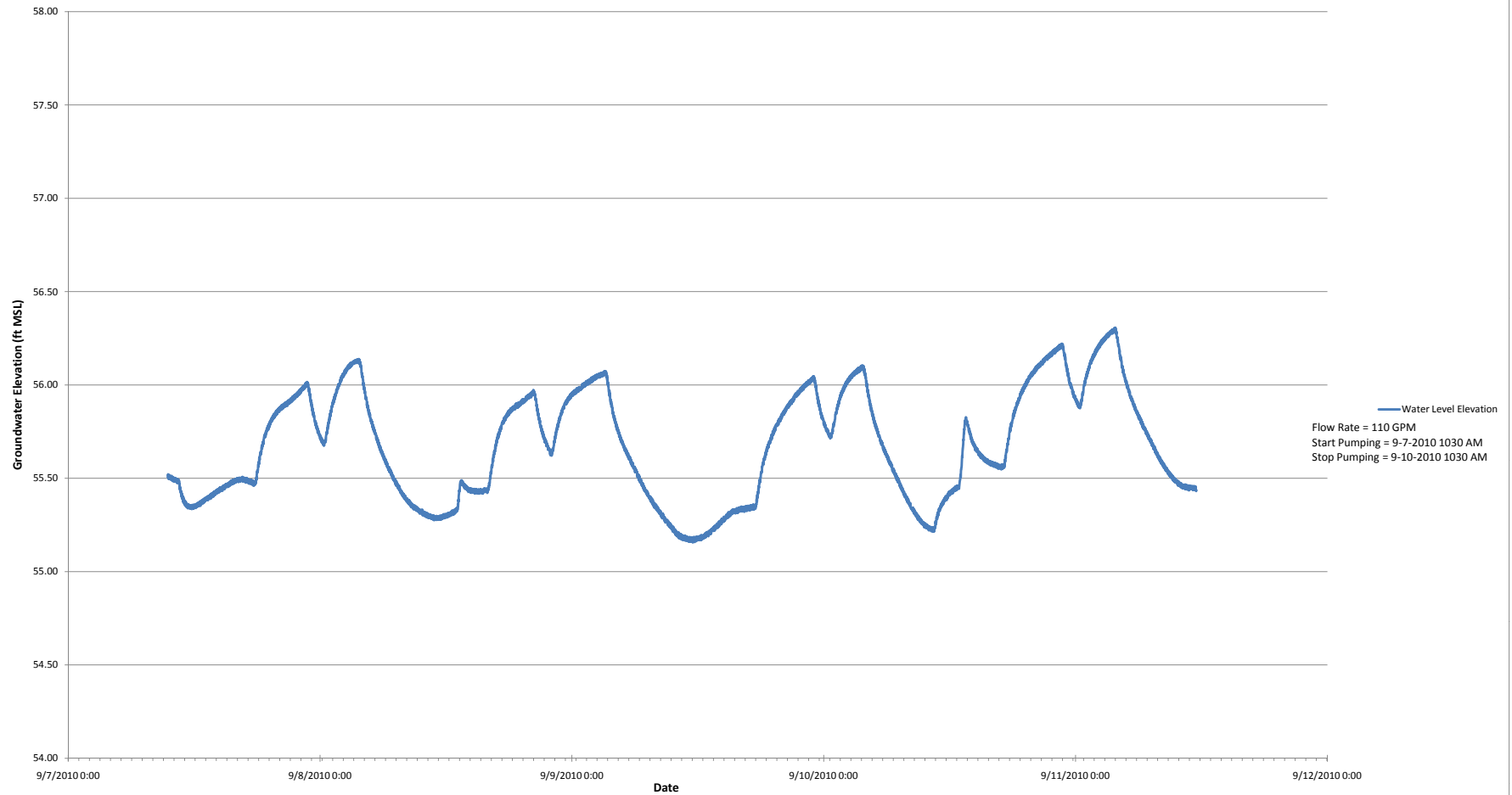
Old Roosevelt Field Site
Water Level Elevation: SVP-3, Draw Down and Recovery



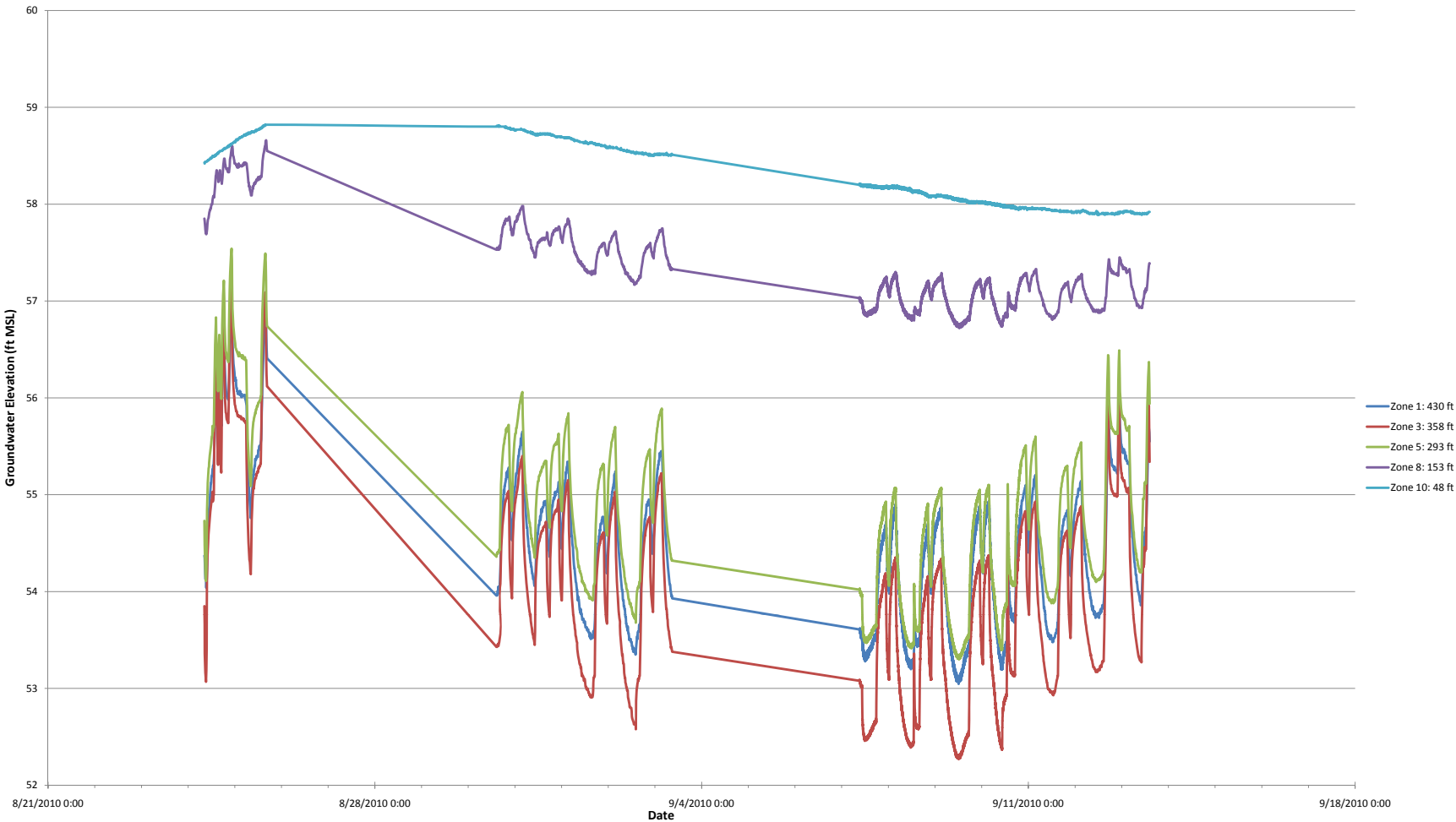
Old Roosevelt Field Site
Water Level Elevation: SVP-4, All Data



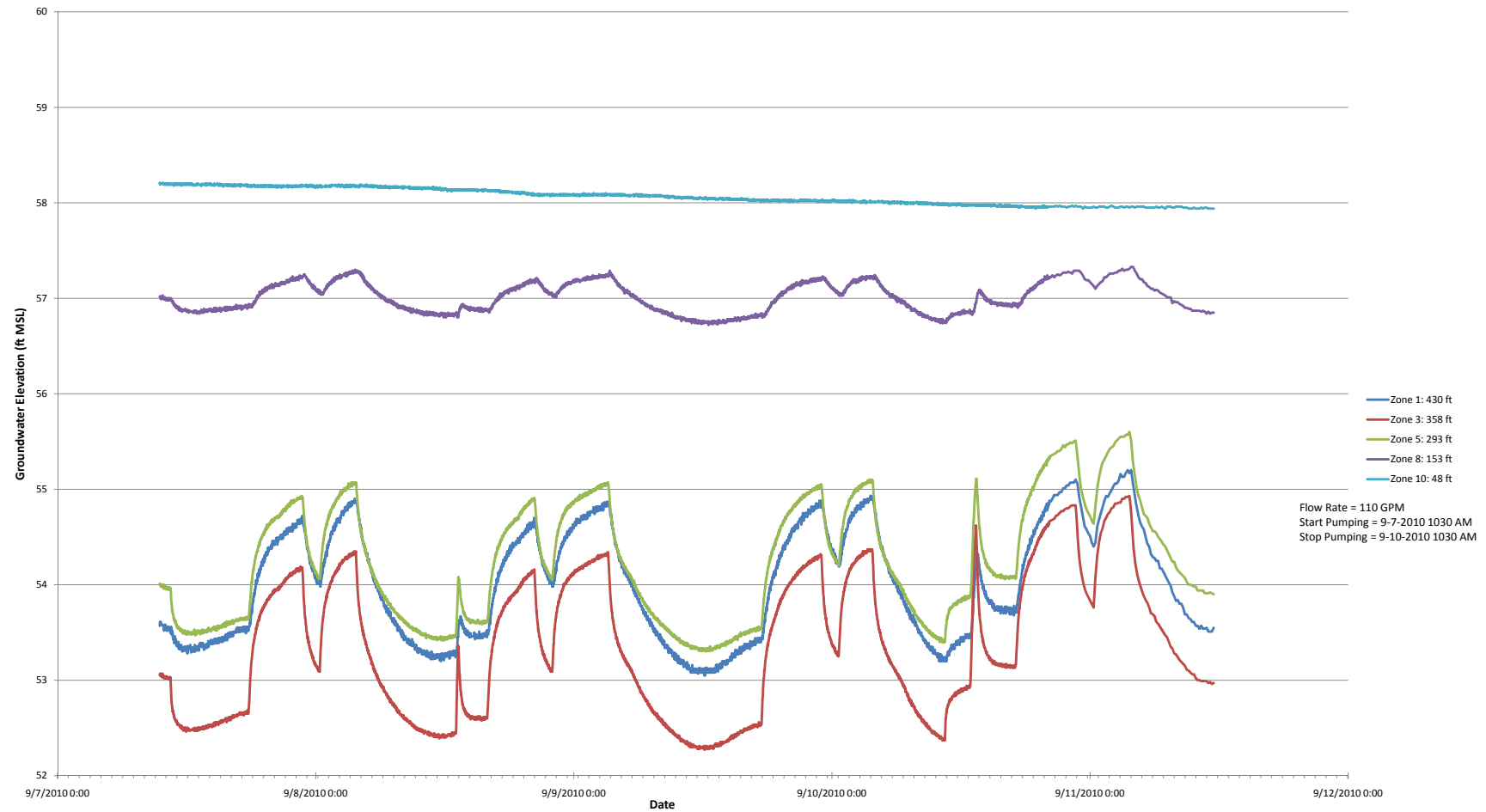
Old Roosevelt Field Site
Water Level Elevation: SVP-4, Draw Down and Recovery



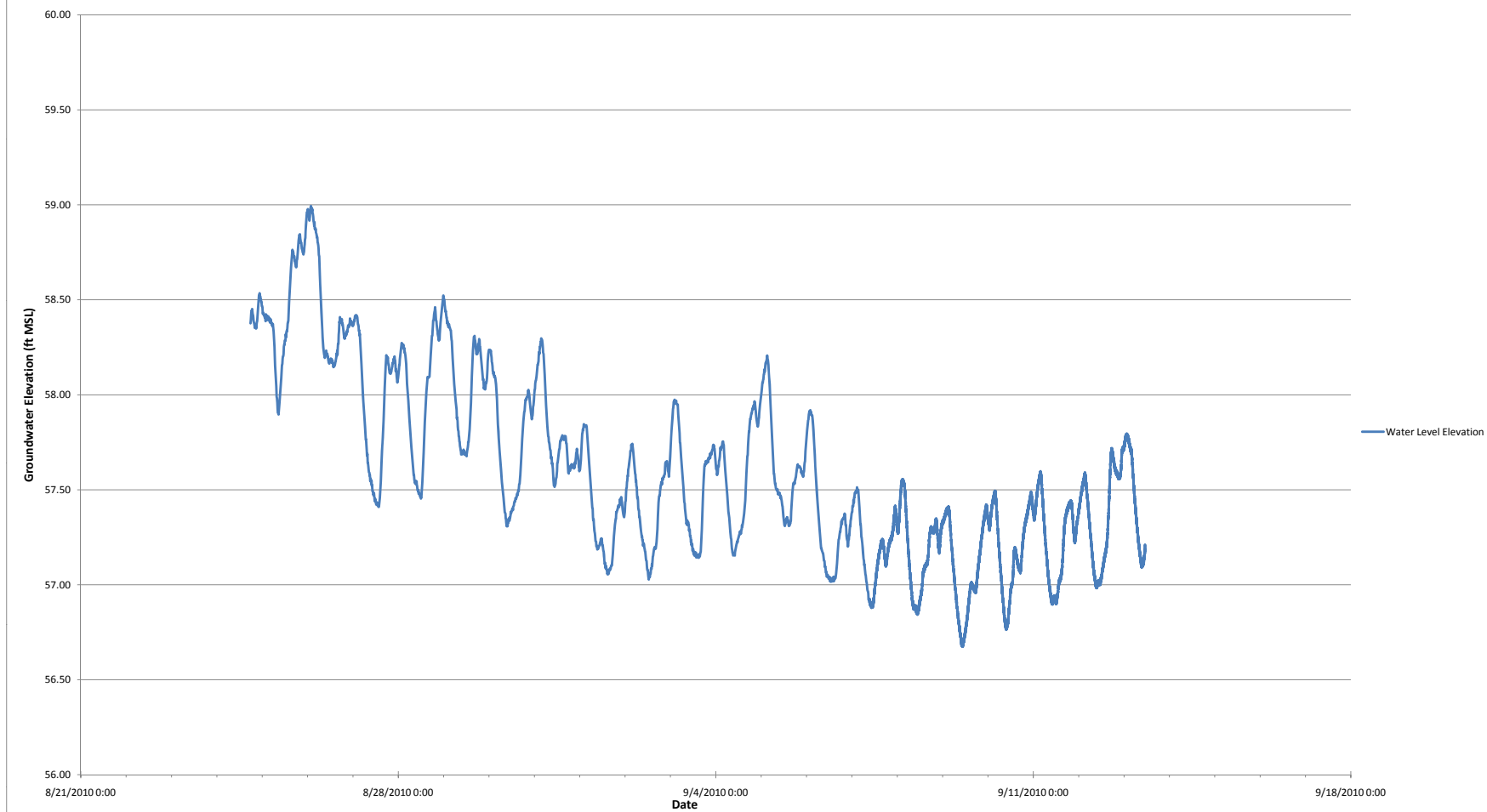
Old Roosevelt Field Site
Water Level Elevation: SVP-5, All Data



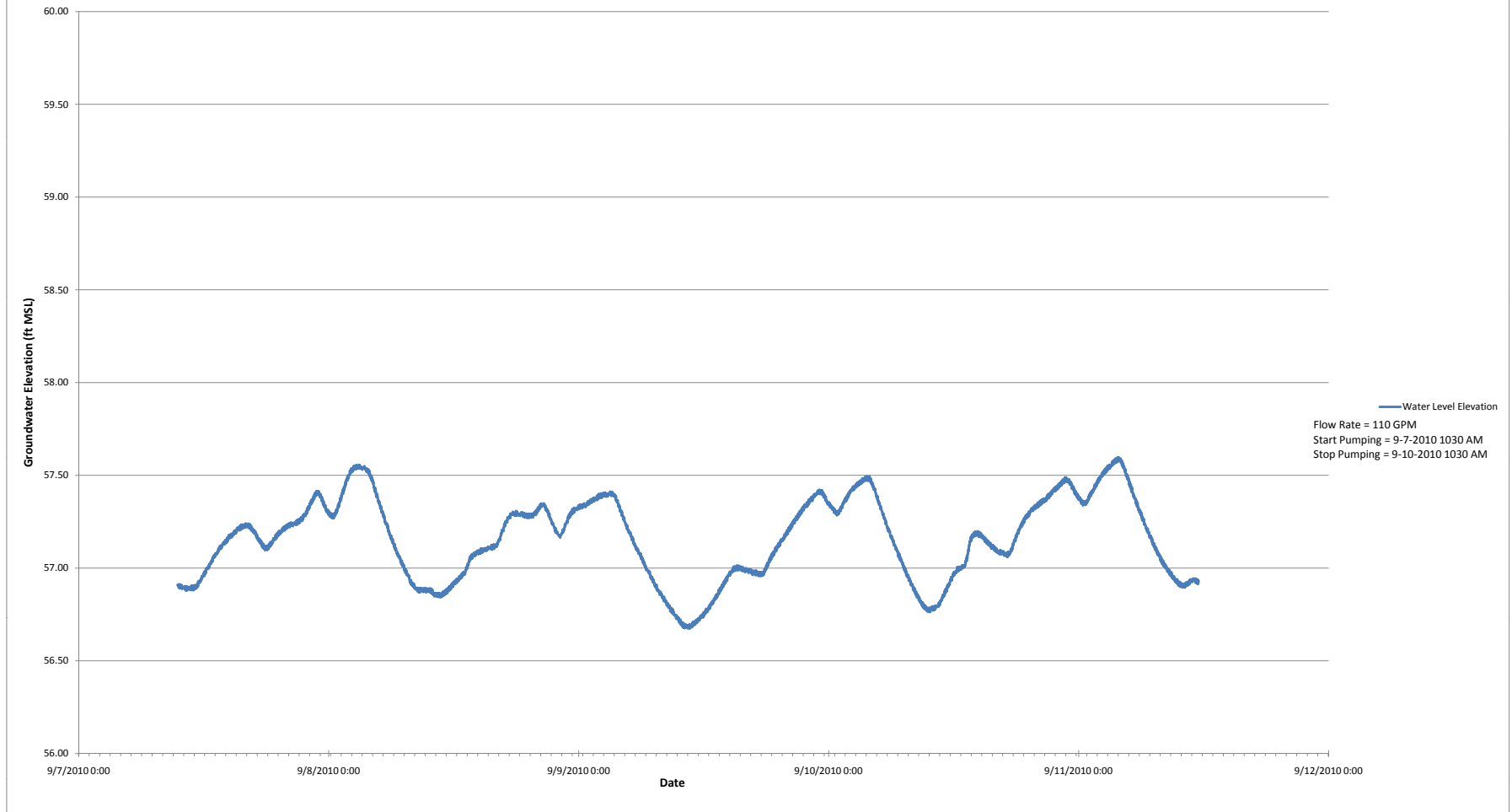
Old Roosevelt Field Site
Water Level Elevation: SVP-5, Draw Down and Recovery



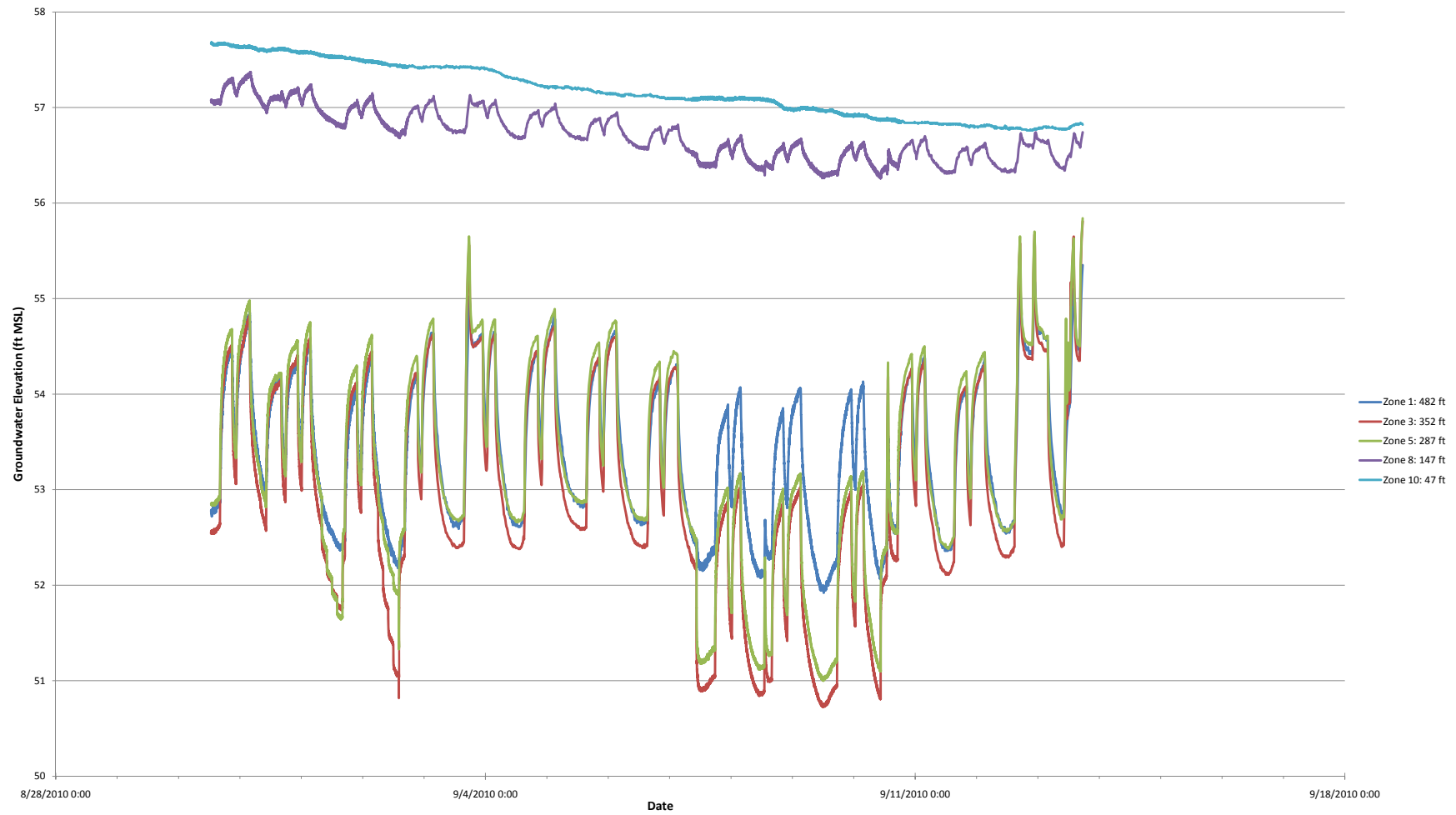
Old Roosevelt Field Site
Water Level Elevation: SVP-9, All Data



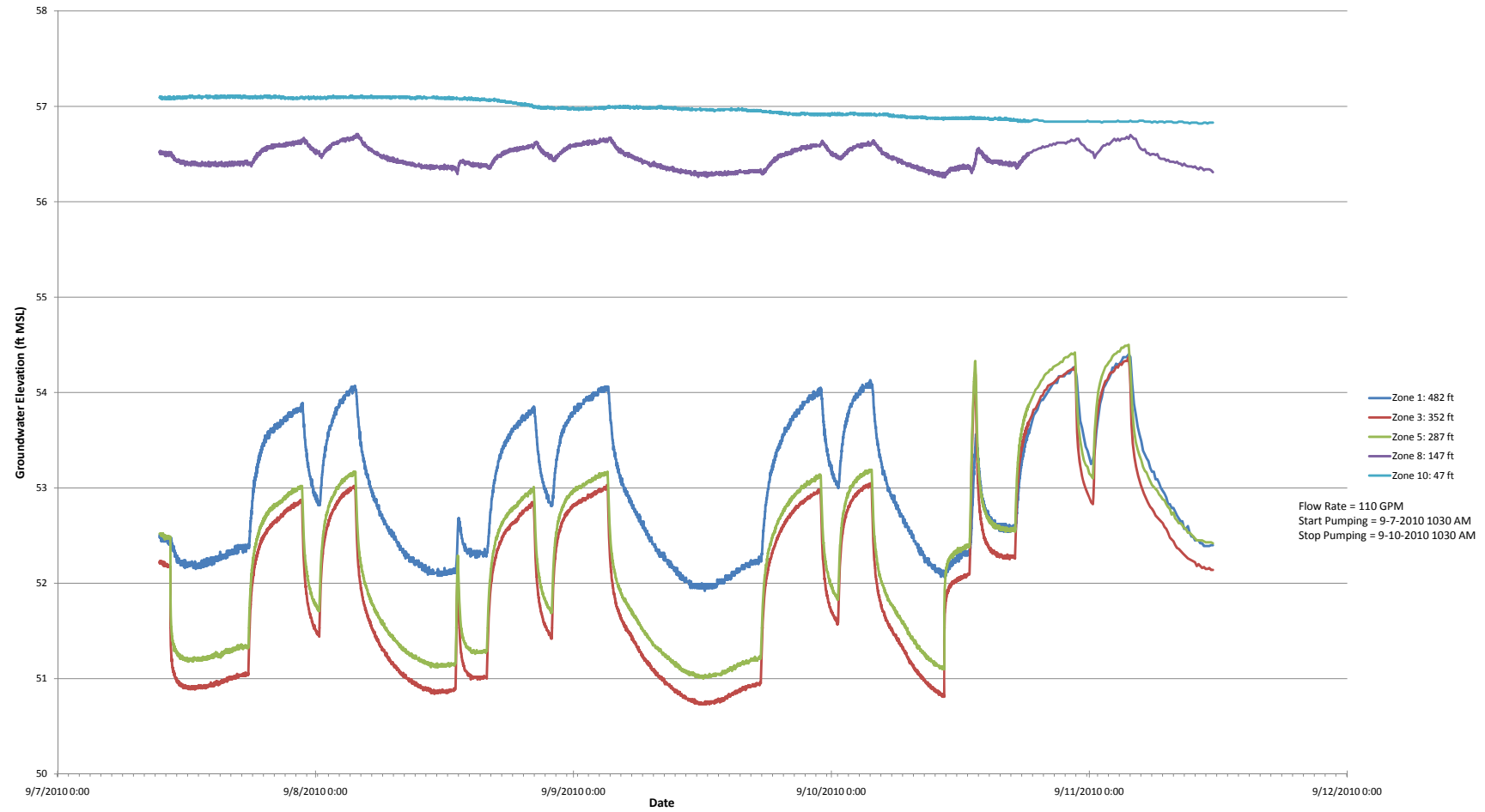
Old Roosevelt Field Site
Water Level Elevation: SVP-9, Draw Down and Recovery



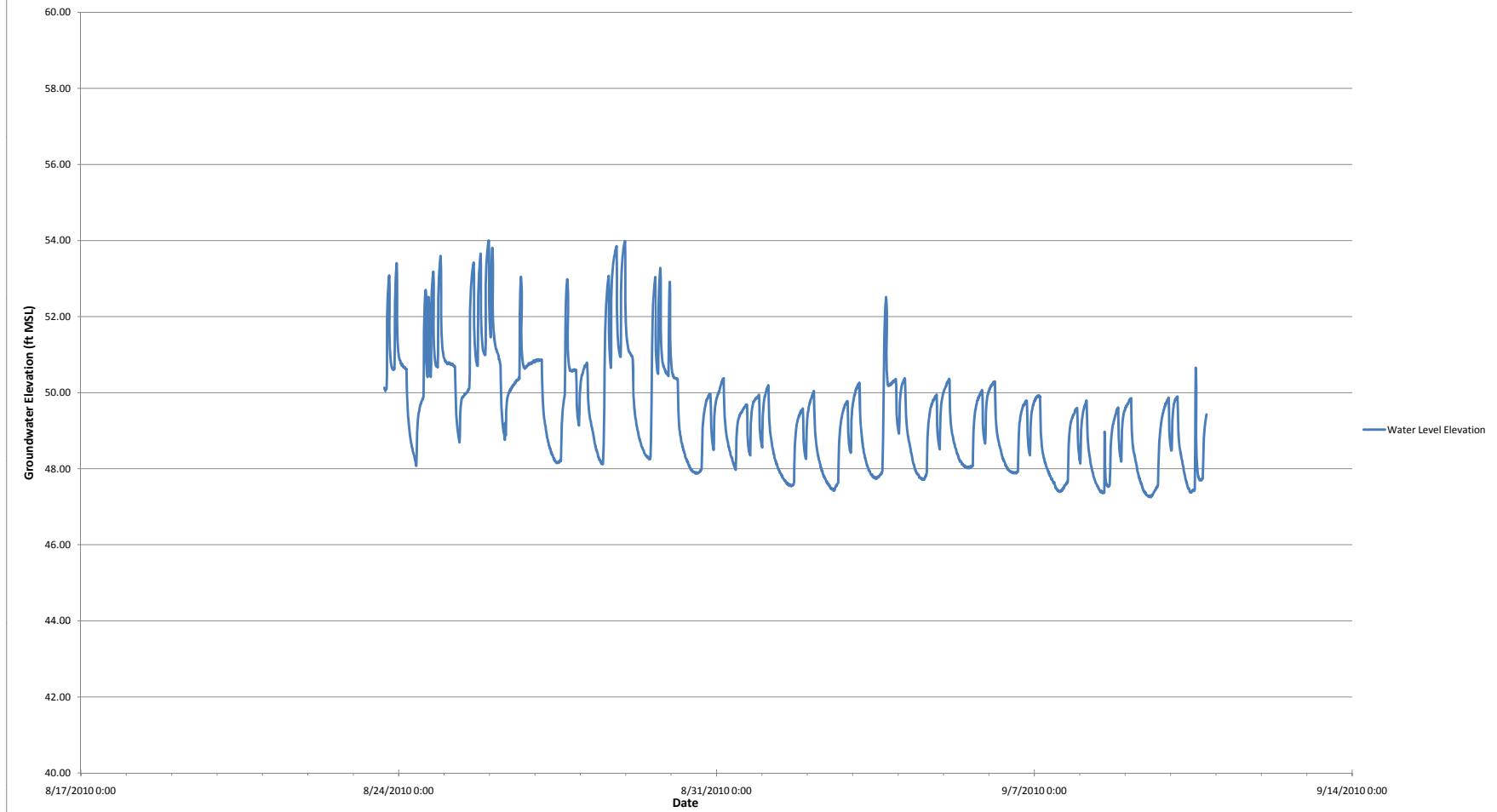
Old Roosevelt Field Site
Water Level Elevation: SVP-10, All Data



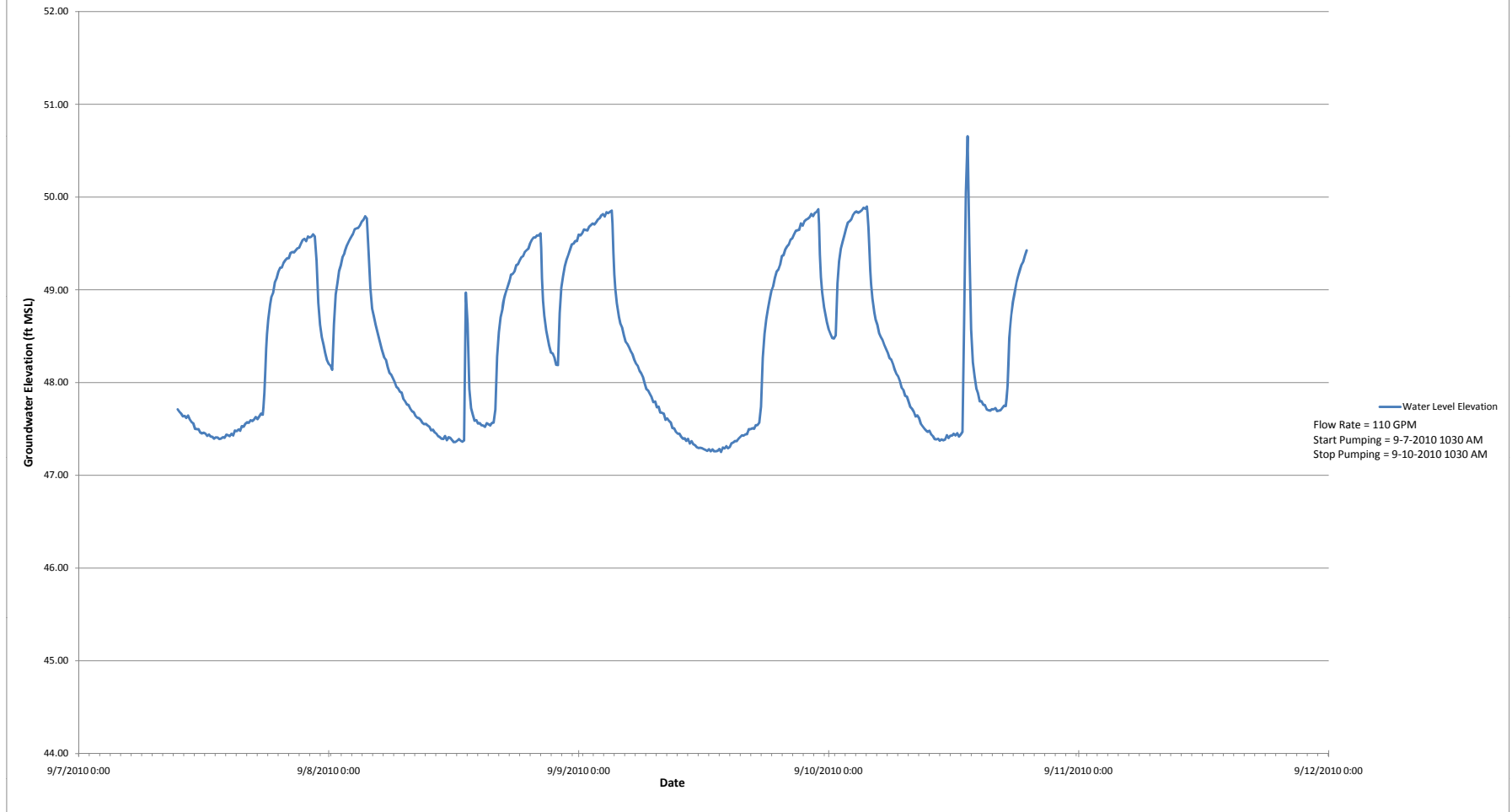
Old Roosevelt Field Site
Water Level Elevation: SVP-10, Draw Down and Recovery



Old Roosevelt Field Site
Water Level Elevation: SVP-11, All Data

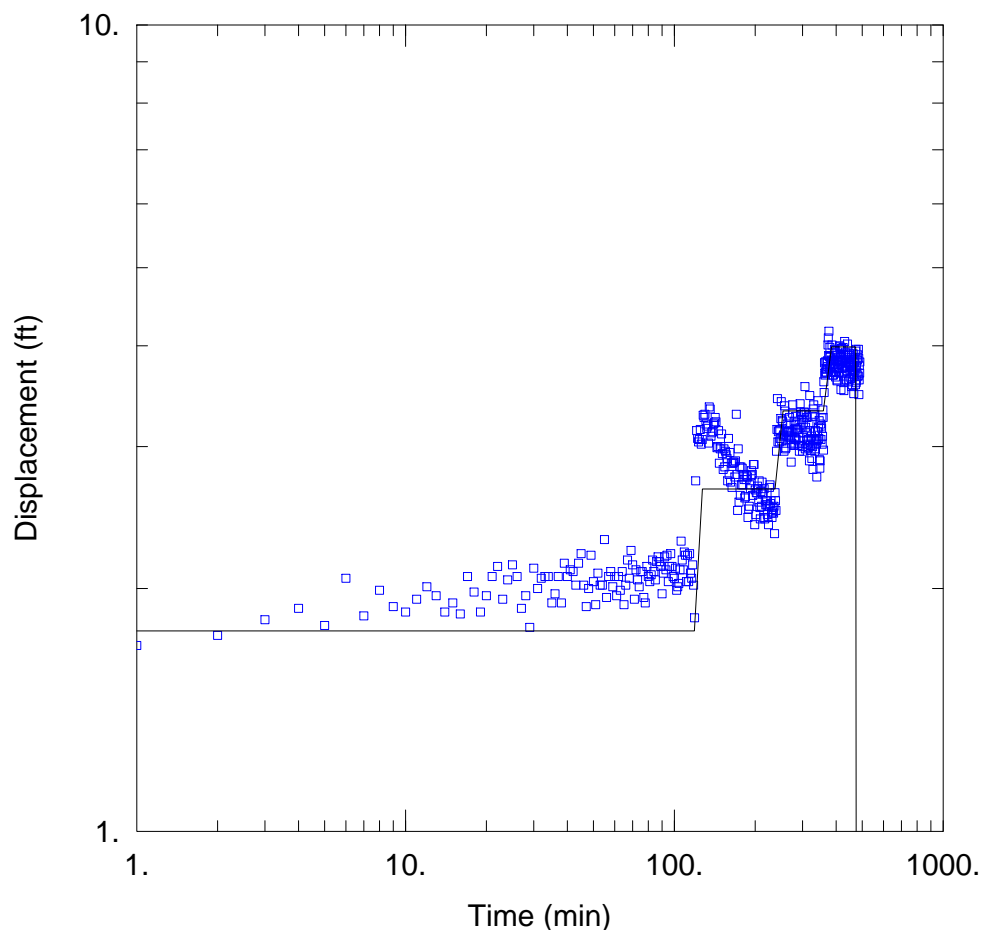


Old Roosevelt Field Site
Water Level Elevation: SVP-11, Draw Down and Recovery



Appendix G

Step Test Analyses



EW-1S

Data Set: C:\...\EW-1S_Step_Test.aqt

Date: 06/21/11

Time: 21:56:01

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

AQUIFER DATA

Saturated Thickness: 452. ft

Aquitard Thickness (b'): 20. ft

Anisotropy Ratio (Kz/Kr): 0.01

Aquitard Thickness (b''): 1. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-1S</u>	<u>2105932.01</u>	<u>186070.8029</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>EW-1S</u>	<u>2105932.01</u>	<u>186070.8029</u>

SOLUTION

Aquifer Model: Leaky

T = 2.716E+4 ft²/day

r/B = 10.

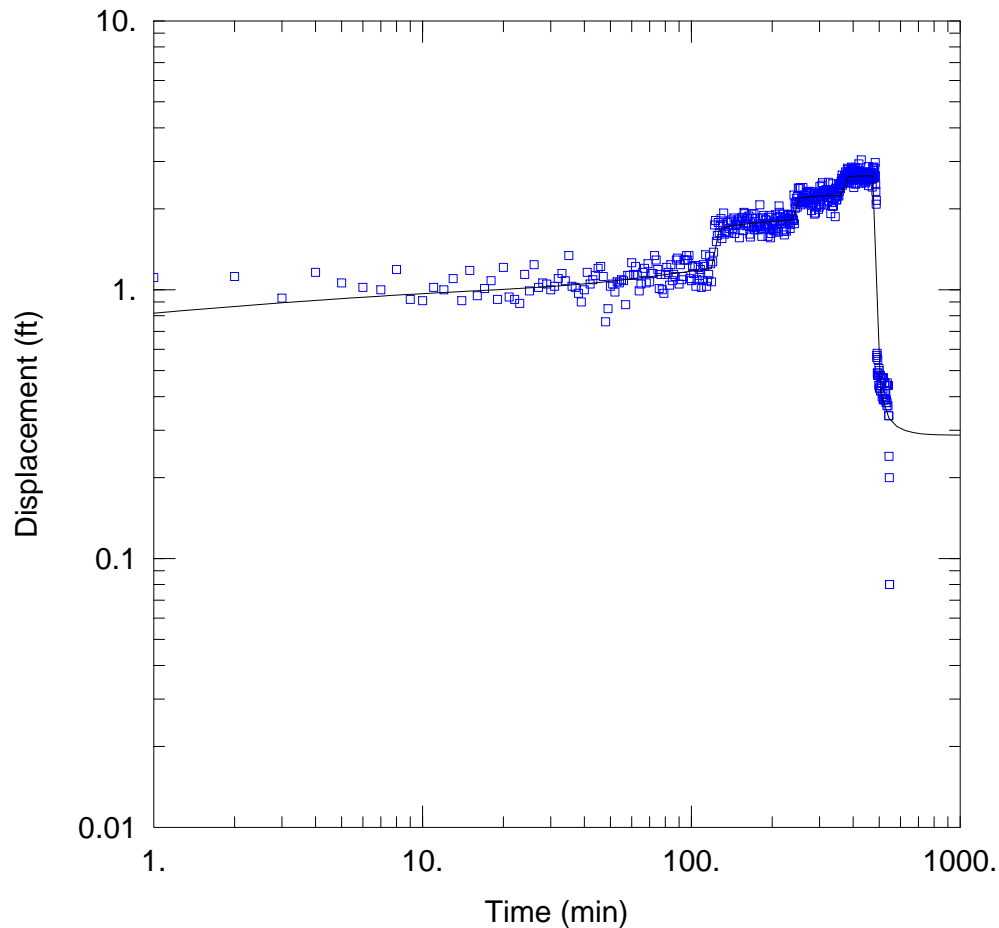
C = 0. min²/ft⁵

Solution Method: Hantush-Jacob

S = 5.58E-5

Sw = 0.

P = 1.889



EW-11

Data Set: C:\...\EW-11_Step_Test.aqt

Date: 06/21/11

Time: 21:54:01

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

AQUIFER DATA

Saturated Thickness: 452. ft

Aquitard Thickness (b'): 20. ft

Anisotropy Ratio (Kz/Kr): 0.01

Aquitard Thickness (b''): 1. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-11</u>	<u>2105927.5</u>	<u>186080.2383</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>EW-11</u>	<u>2105927.5</u>	<u>186080.2383</u>

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

T = 5.785E+4 ft²/day

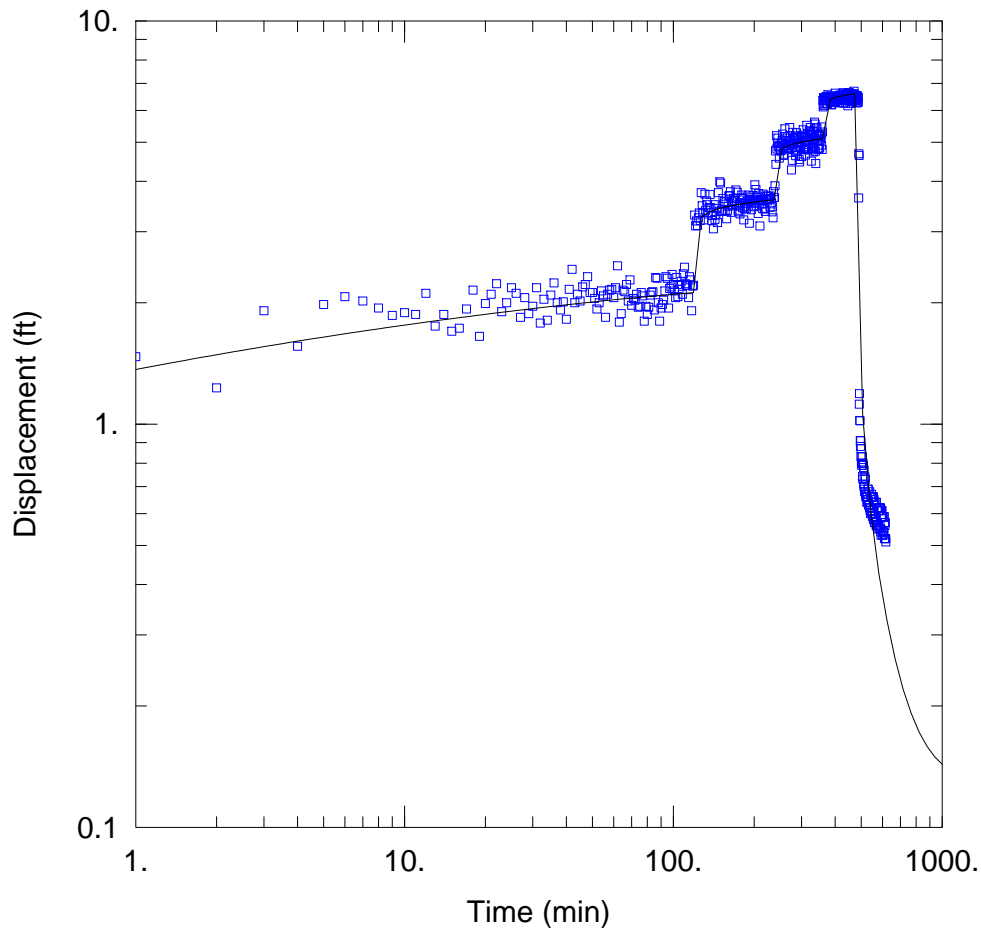
S = 0.0161

r/B = 0.8375

Sw = 0.

C = 0. min²/ft⁵

P = 1.917



EW-1D STEP TEST

Data Set: C:\...\EW-1D_Step_Test.aqt

Date: 06/21/11

Time: 21:51:29

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

AQUIFER DATA

Saturated Thickness: 452. ft

Aquitard Thickness (b'): 20. ft

Anisotropy Ratio (Kz/Kr): 0.01

Aquitard Thickness (b''): 1. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-1D</u>	<u>2105923.0</u>	<u>186089.35</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>EW-1D</u>	<u>2105923.0</u>	<u>186089.35</u>

SOLUTION

Aquifer Model: Leaky

T = 3.858E+4 ft²/day

r/B = 2.787

C = 0. min²/ft⁵

Solution Method: Hantush-Jacob

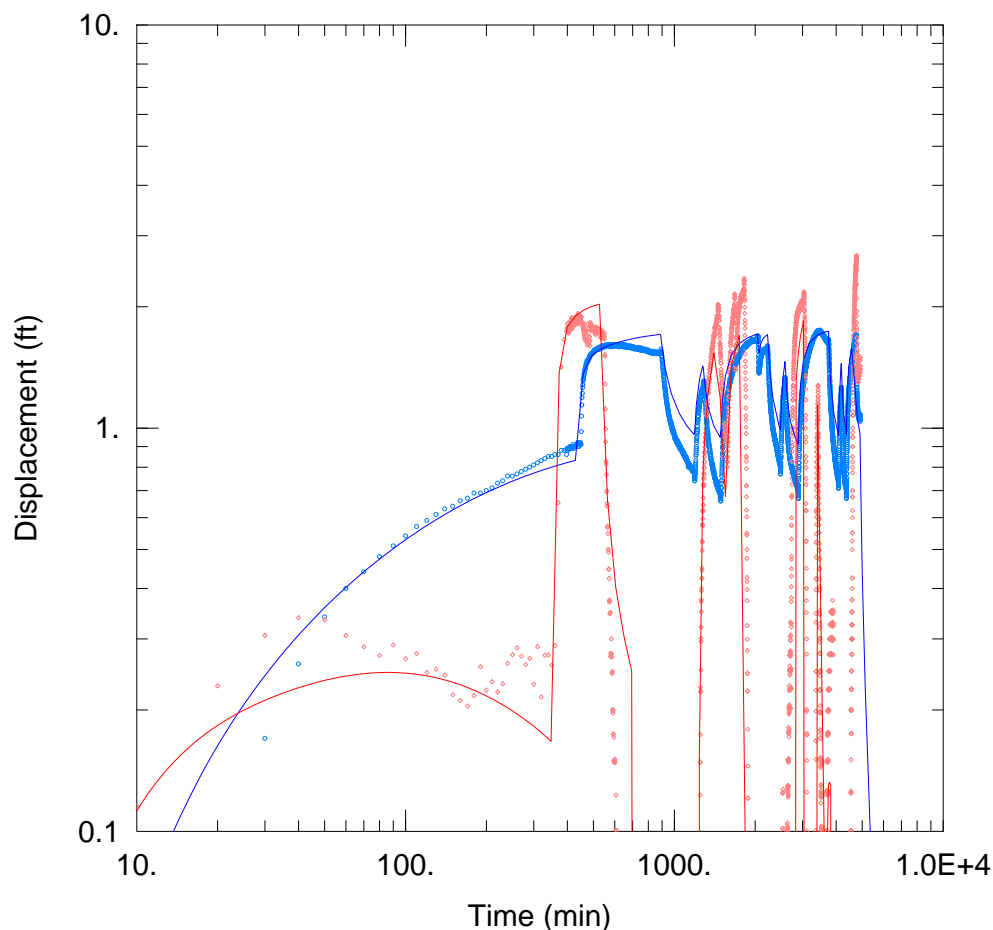
S = 0.246

Sw = 0.

P = 1.787

Appendix H

Extraction Well Pumping Well Data Analyses



GWX-10019, EW PUMPING

Data Set: C:\...\GWX-10019-EW_Pump_Test-HJ.aqt

Date: 06/24/11

Time: 15:01:17

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>GWX-10019</u>	2105876.5	185981.259

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

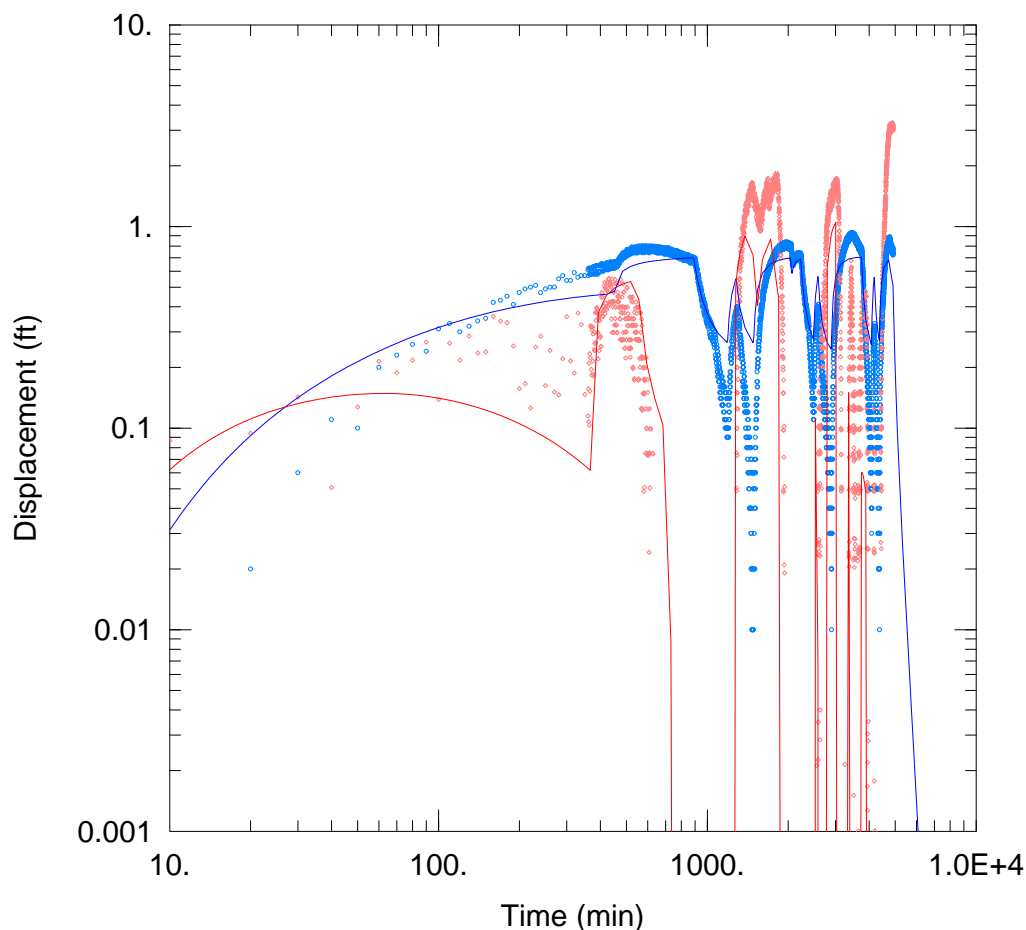
T = 4.866E+4 ft²/day

S = 0.0006809

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



GWX-10020, EW PUMPING

Data Set: C:\...\GWX-10020-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 11:43:54

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>GWX-10020</u>	2106480.13	185775.454

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

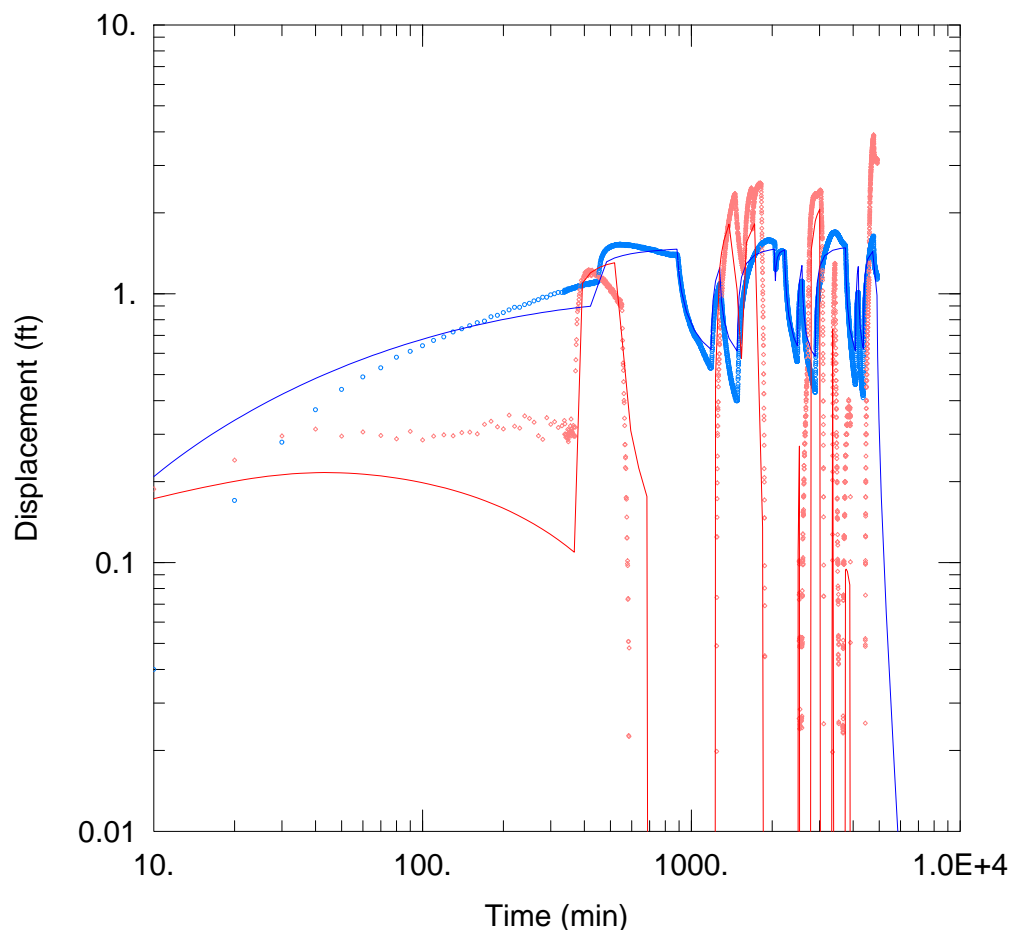
T = 7.464E+4 ft²/day

S = 0.0007254

r/B = 0.1992

Kz/Kr = 0.01

b = 452. ft



MW-1S, EW PUMPING

Data Set: C:\...\MW-1S-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 16:27:28

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
• <u>MW-1S</u>	2106106.4	186328.080

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

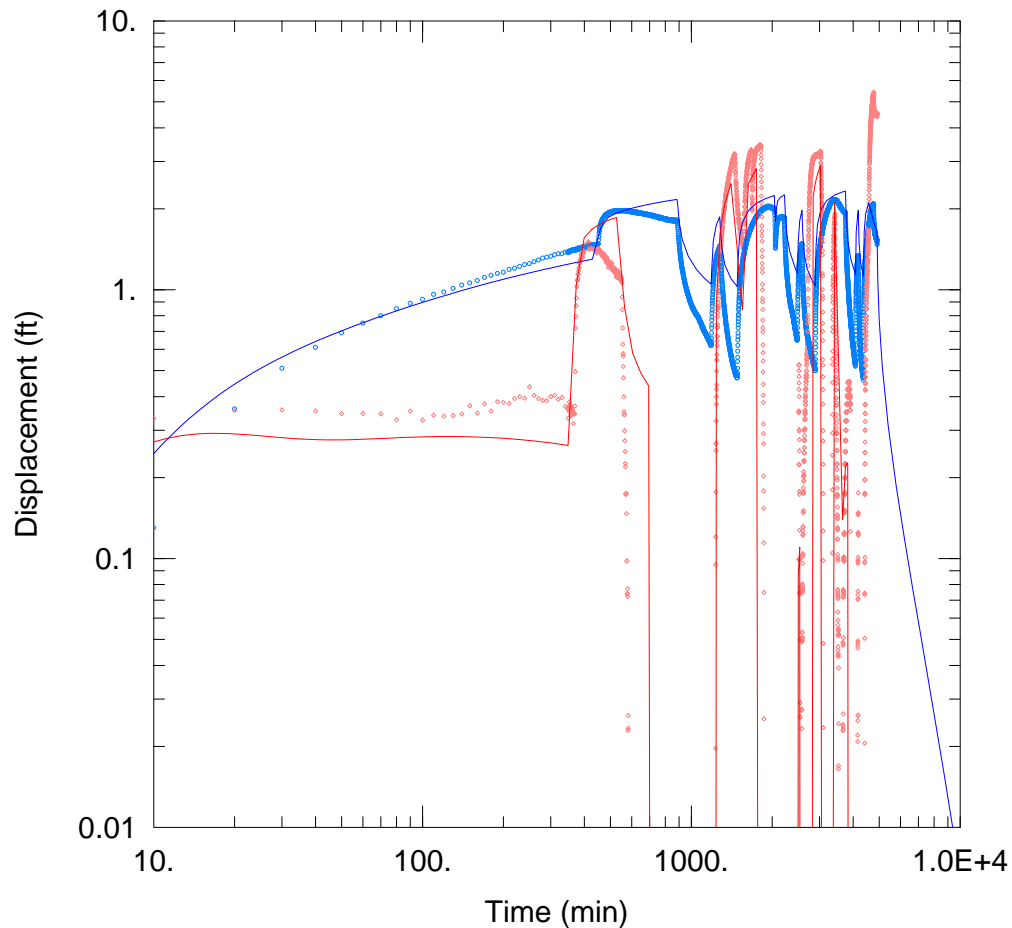
T = 6.051E+4 ft²/day

S = 0.0002997

r/B = 0.1199

Kz/Kr = 0.01

b = 452. ft



MW-1I, EW PUMPING

Data Set: C:\...\MW-1I-EW_Pump_Test-HJ.aqt

Date: 06/24/11

Time: 15:53:23

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
• <u>MW-1I</u>	2106083.1	186321.746

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

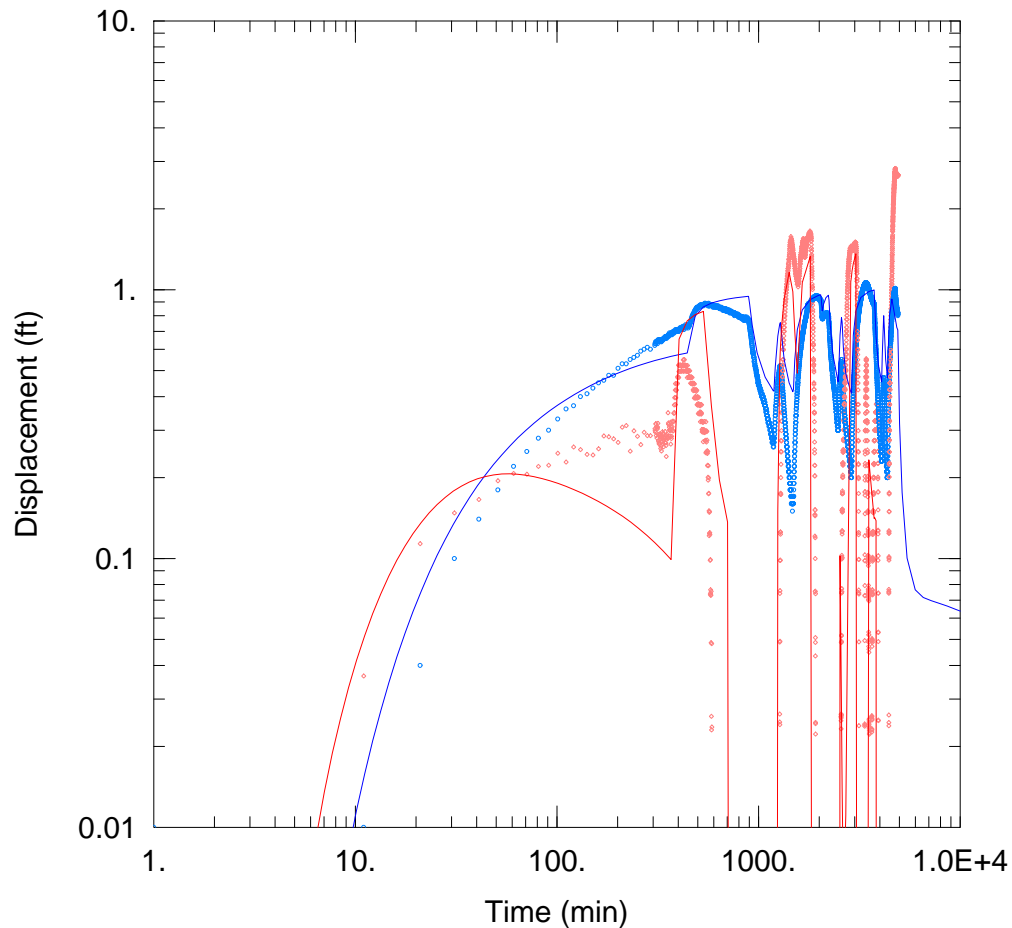
T = 4.818E+4 ft²/day

S = 0.0007946

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



MW-2S, EW PUMPING

Data Set: C:\...\MW-2S-EW_Pump_Test-NU.aqt

Date: 06/26/11

Time: 16:18:59

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

AQUIFER DATA

Saturated Thickness: 452. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-1S</u>	<u>2105932.0</u>	<u>186070.8029</u>
<u>EW-1I</u>	<u>2105927.5</u>	<u>186080.2383</u>
<u>EW-1D</u>	<u>2105923.0</u>	<u>186089.3509</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>• MW-2S</u>	<u>2106577.5</u>	<u>186411.469</u>

SOLUTION

Aquifer Model: Unconfined

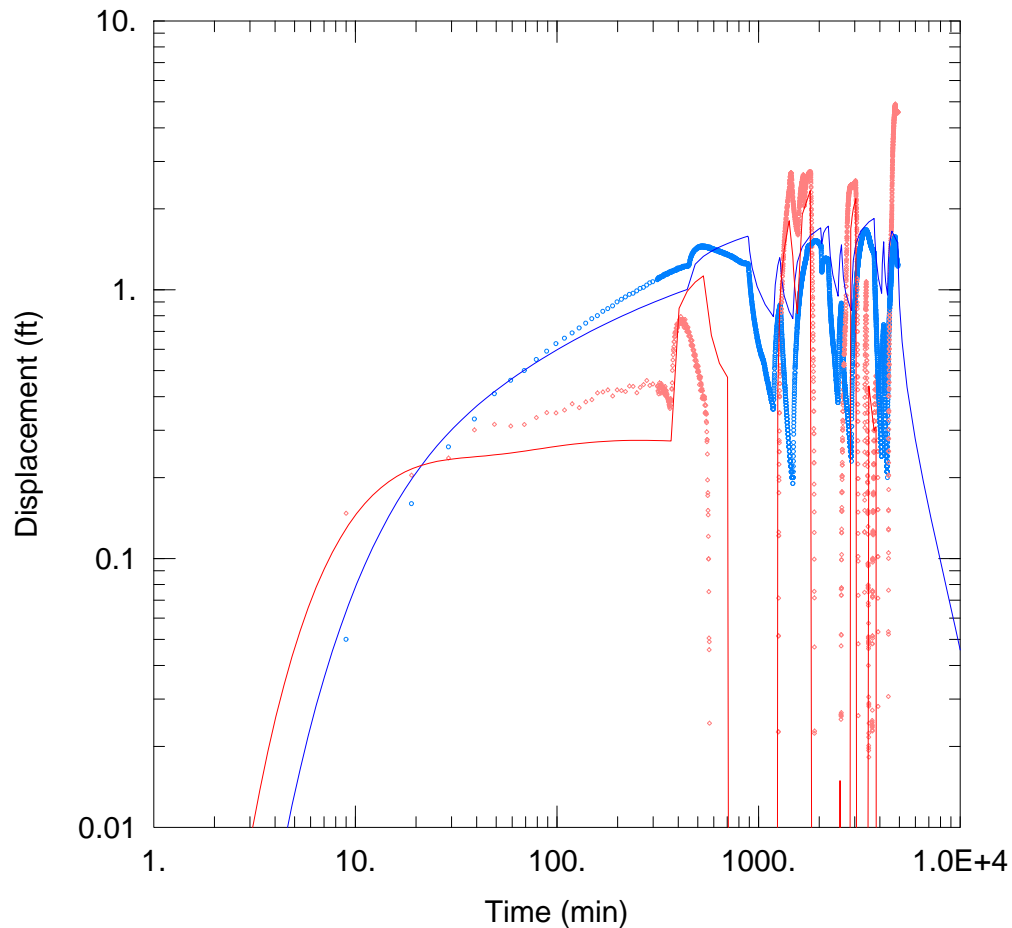
Solution Method: Neuman

$T = 4.631E+4 \text{ ft}^2/\text{day}$

$S = 0.001017$

$S_y = 0.0572$

$\beta = 0.06$



MW-2I, EW PUMPING

Data Set: C:\...\MW-2I-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 16:34:51

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
• <u>MW-2I</u>	2106564.0	186423.590

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

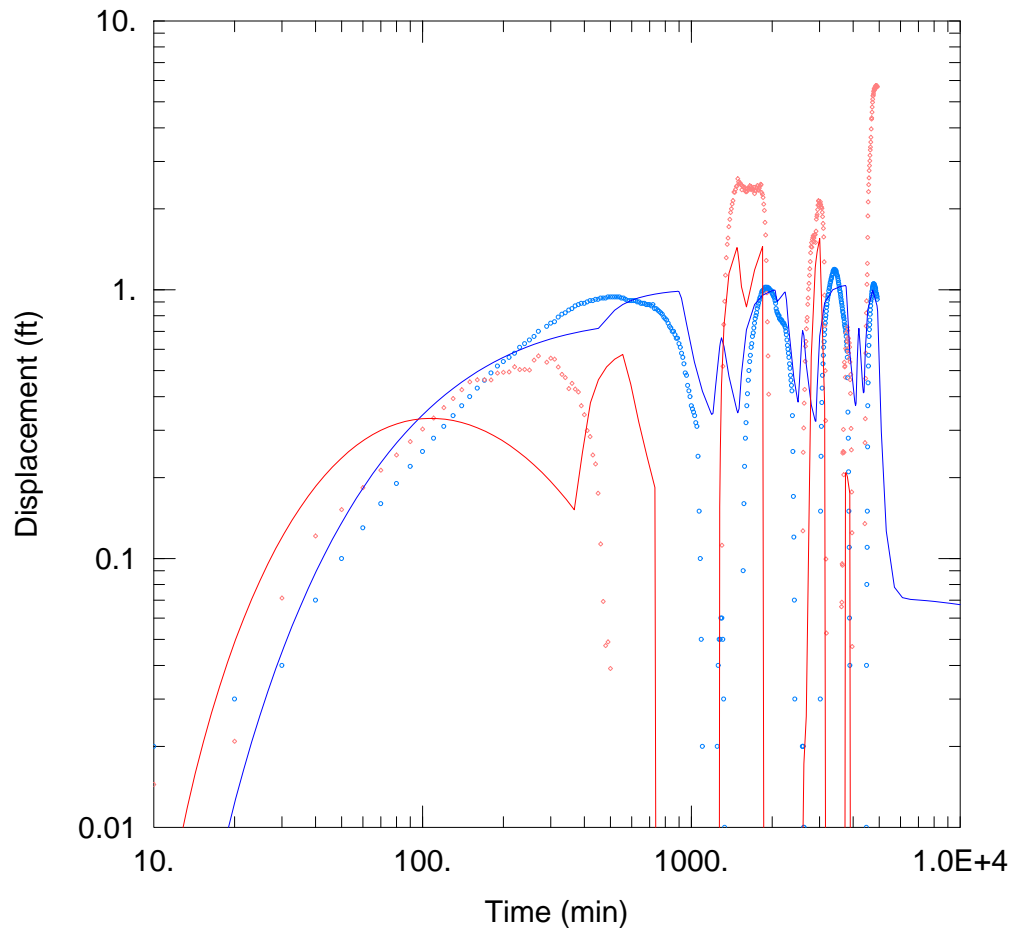
T = 5.028E+4 ft²/day

S = 0.001024

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



MW-3S, EW PUMPING

Data Set: C:\...\MW-3S-EW_Pump_Test-NU.aqt

Date: 06/26/11

Time: 16:17:21

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

AQUIFER DATA

Saturated Thickness: 452. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-1S</u>	<u>2105932.0</u>	<u>186070.8029</u>
<u>EW-1I</u>	<u>2105927.5</u>	<u>186080.2383</u>
<u>EW-1D</u>	<u>2105923.0</u>	<u>186089.3509</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>• MW-3S</u>	<u>2107725.8</u>	<u>185540.091</u>

SOLUTION

Aquifer Model: Unconfined

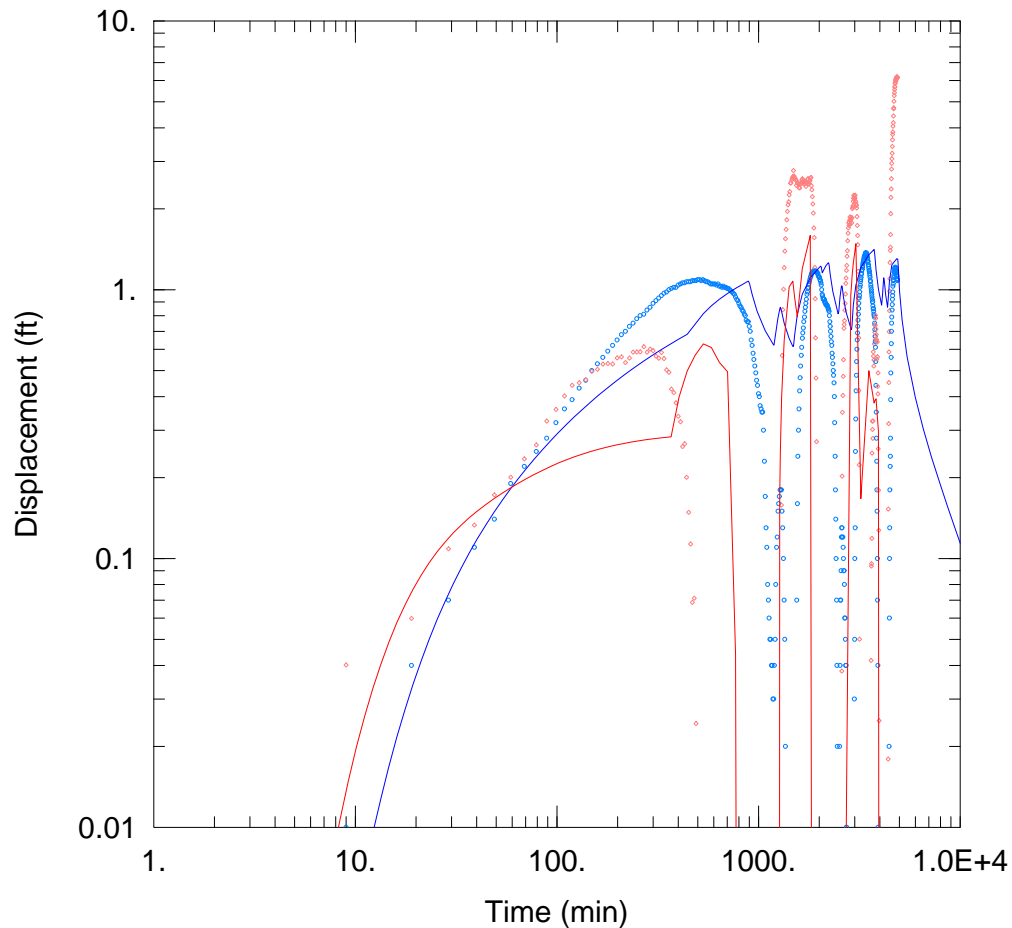
Solution Method: Neuman

$T = 2.05E+4 \text{ ft}^2/\text{day}$

$S = 0.0004107$

$S_y = 0.0572$

$\beta = 0.2269$



MW-3I, EW PUMPING

Data Set: C:\...\MW-3I-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 15:54:11

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
• <u>MW-3I</u>	2107740.05	185546.054

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

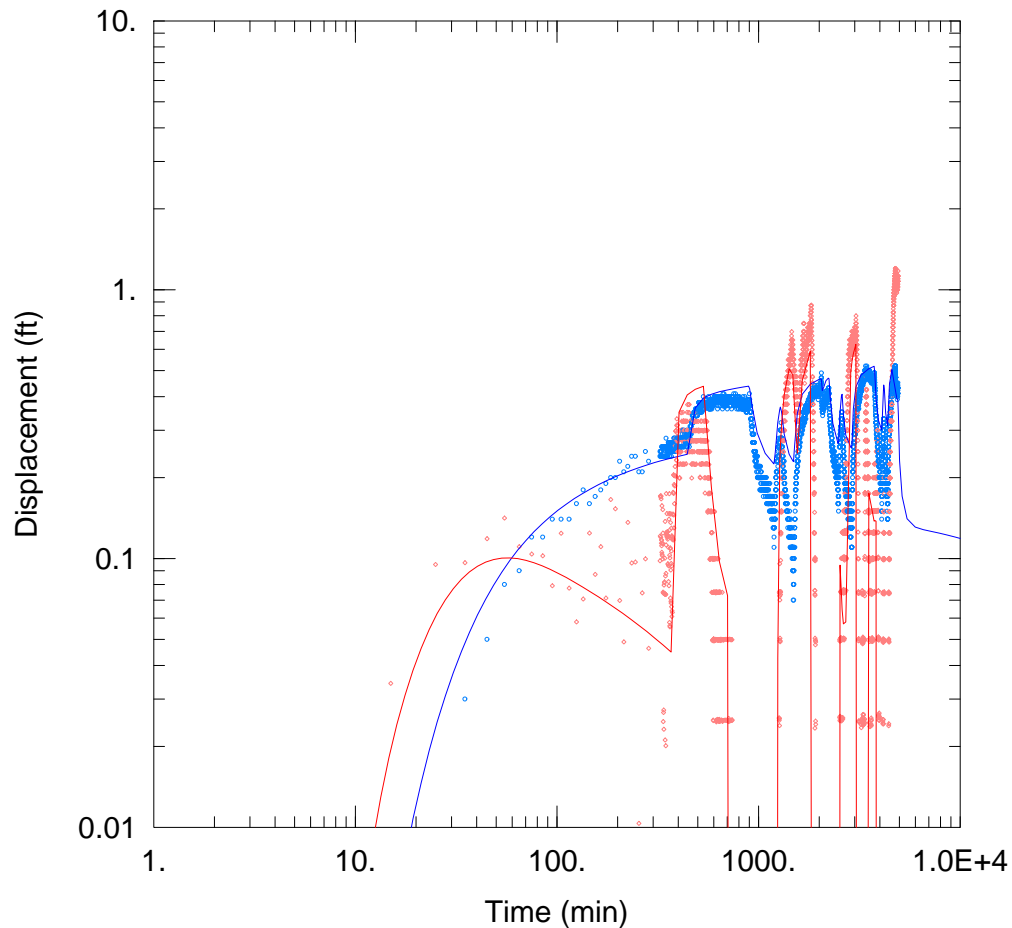
T = 4.785E+4 ft²/day

S = 0.0009827

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 8, EW PUMPING

Data Set: C:\...\SVP-10-8-EW_Pump_Test-NU.aqt

Date: 06/26/11

Time: 22:24:56

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

AQUIFER DATA

Saturated Thickness: 452. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-1S</u>	<u>2105932.0</u>	<u>186070.8029</u>
<u>EW-1I</u>	<u>2105927.5</u>	<u>186080.2383</u>
<u>EW-1D</u>	<u>2105923.0</u>	<u>186089.3509</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-10-8</u>	<u>2105899.1</u>	<u>186072.675</u>

SOLUTION

Aquifer Model: Unconfined

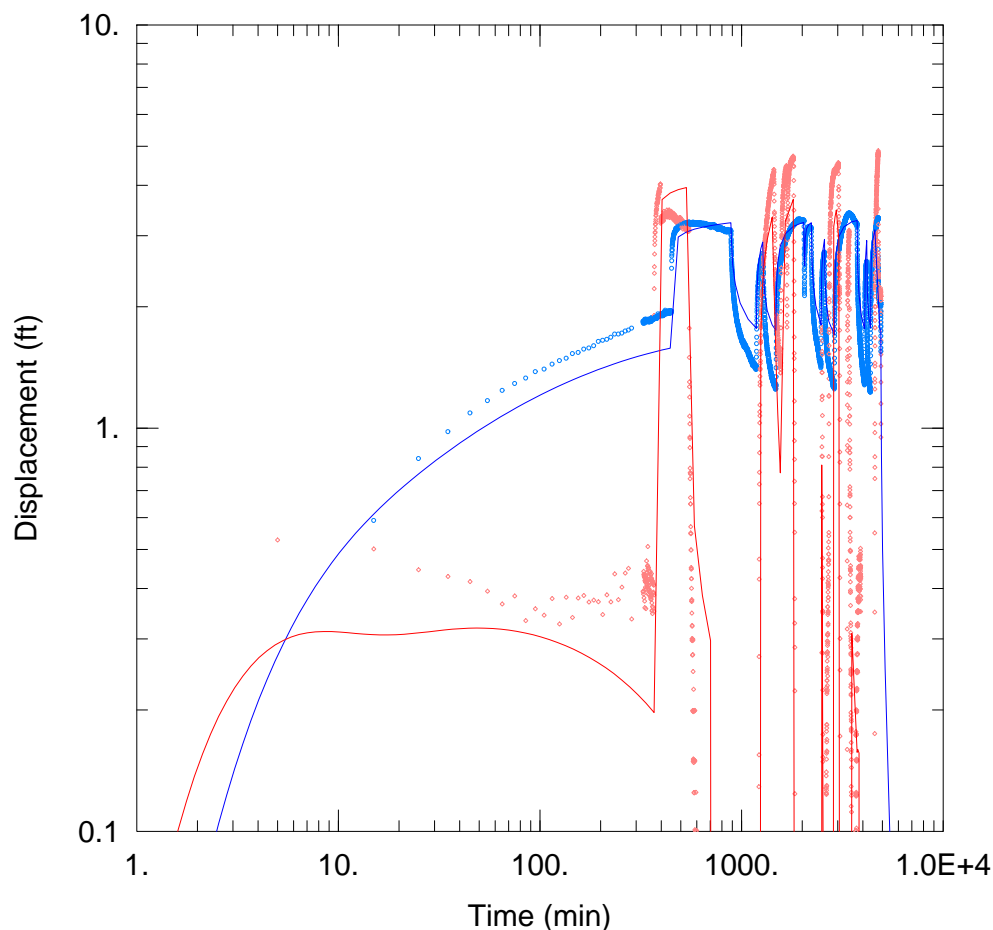
Solution Method: Neuman

T = 2.036E+4 ft²/day

S = 0.0003179

Sy = 0.0572

β = 0.01



SVP-10 PORT 5, EW PUMPING

Data Set: C:\...\SVP-10-5-EW_Pump_Test-HJ-rev.aqt

Date: 06/26/11

Time: 12:56:20

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-10-5</u>	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

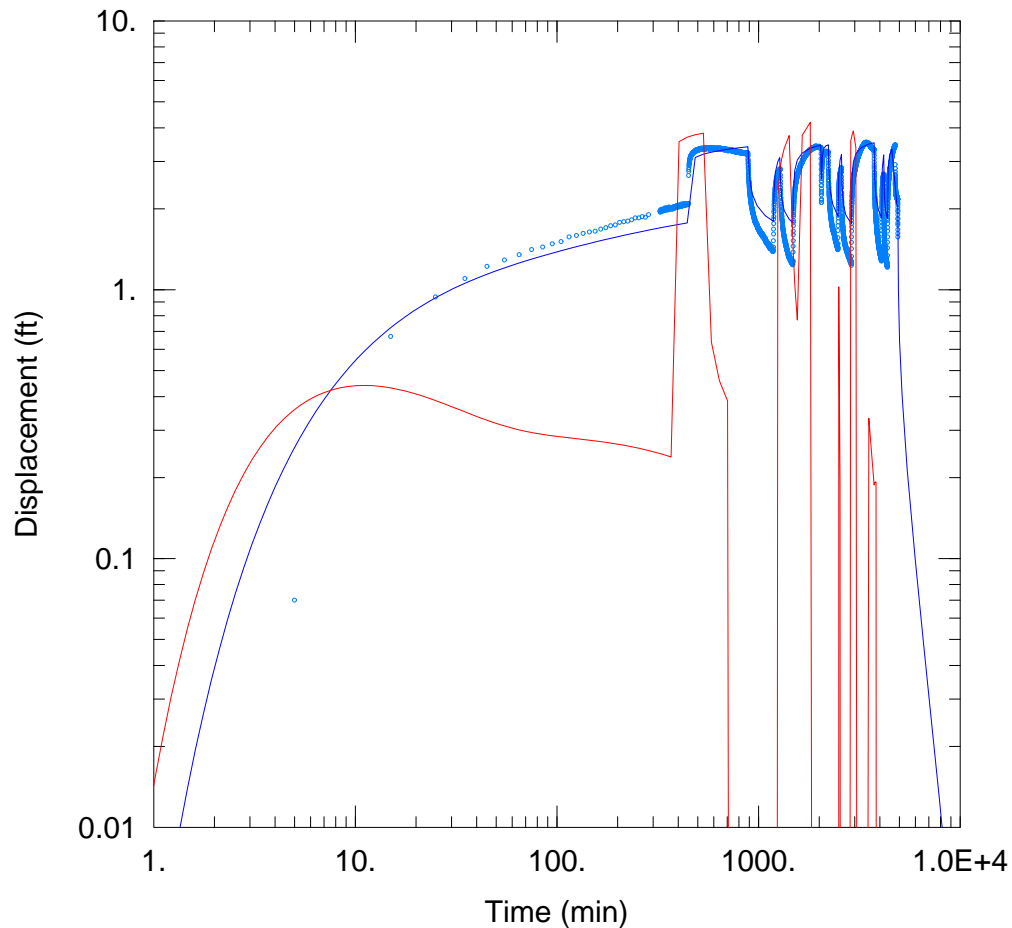
T = 4.217E+4 ft²/day

S = 0.0003005

r/B = 0.0798

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 3, EW PUMPING

Data Set: C:\...\SVP-10-3-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 13:06:31

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-10-3</u>	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

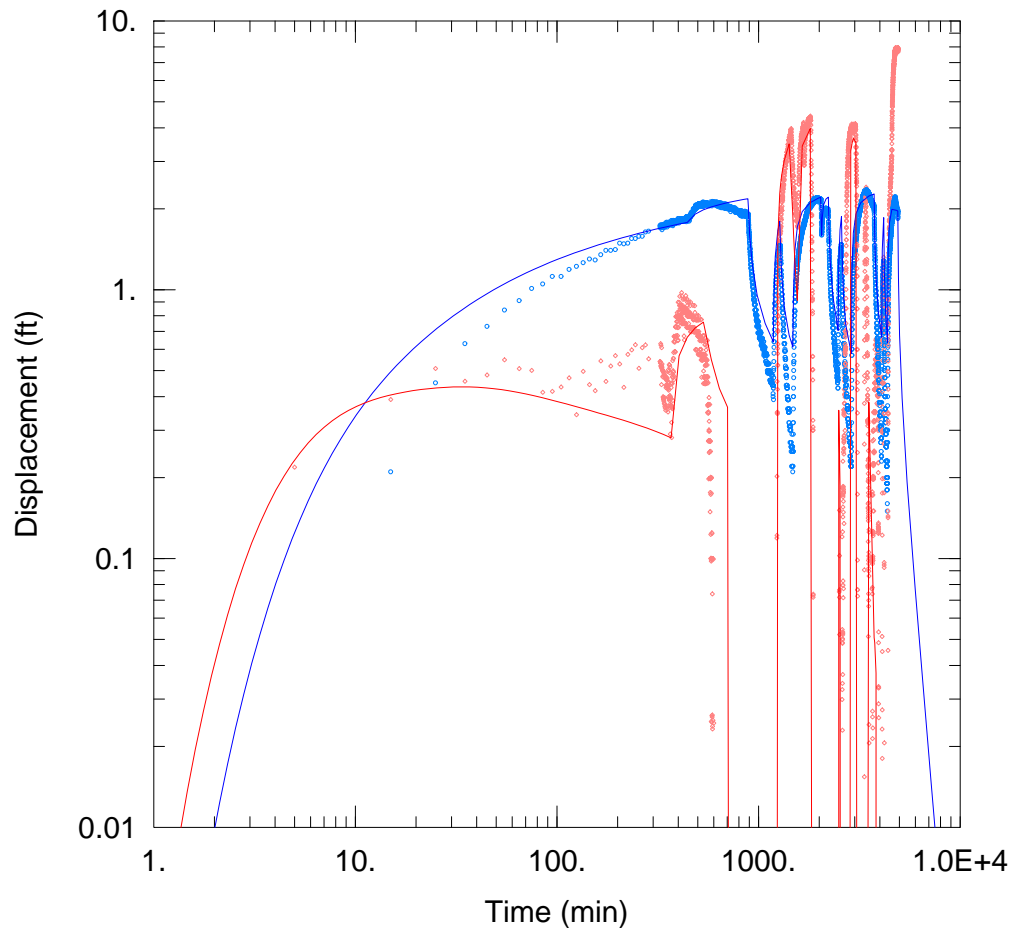
T = 4.926E+4 ft²/day

S = 0.001319

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 1, EW PUMPING

Data Set: C:\...\SVP-10-1-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 15:41:15

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-10-1</u>	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

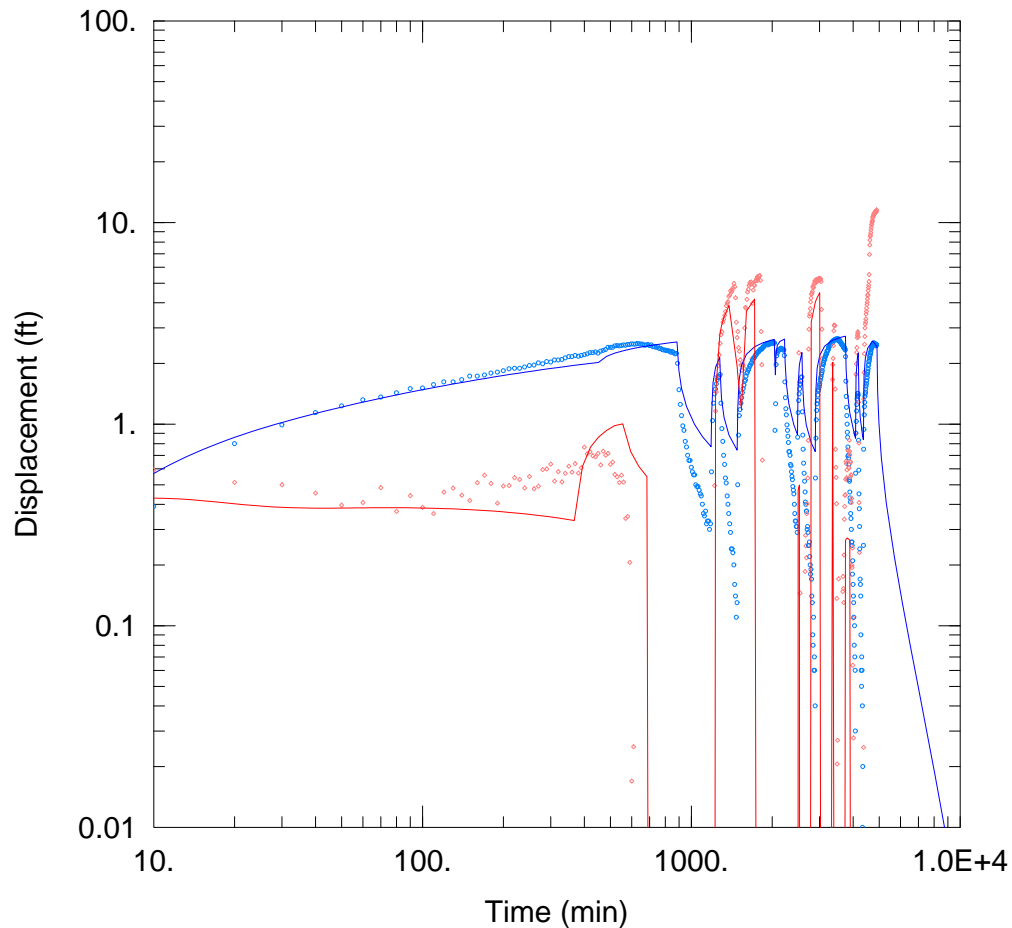
T = 4.133E+4 ft²/day

S = 0.0008352

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



SVP-11 PORT 2, EW PUMPING

Data Set: C:\...\SVP-11-2-EW_Pump_Test-HJ.aqt

Date: 06/26/11

Time: 12:07:34

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-11-2</u>	2105597.0	184603.9354

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

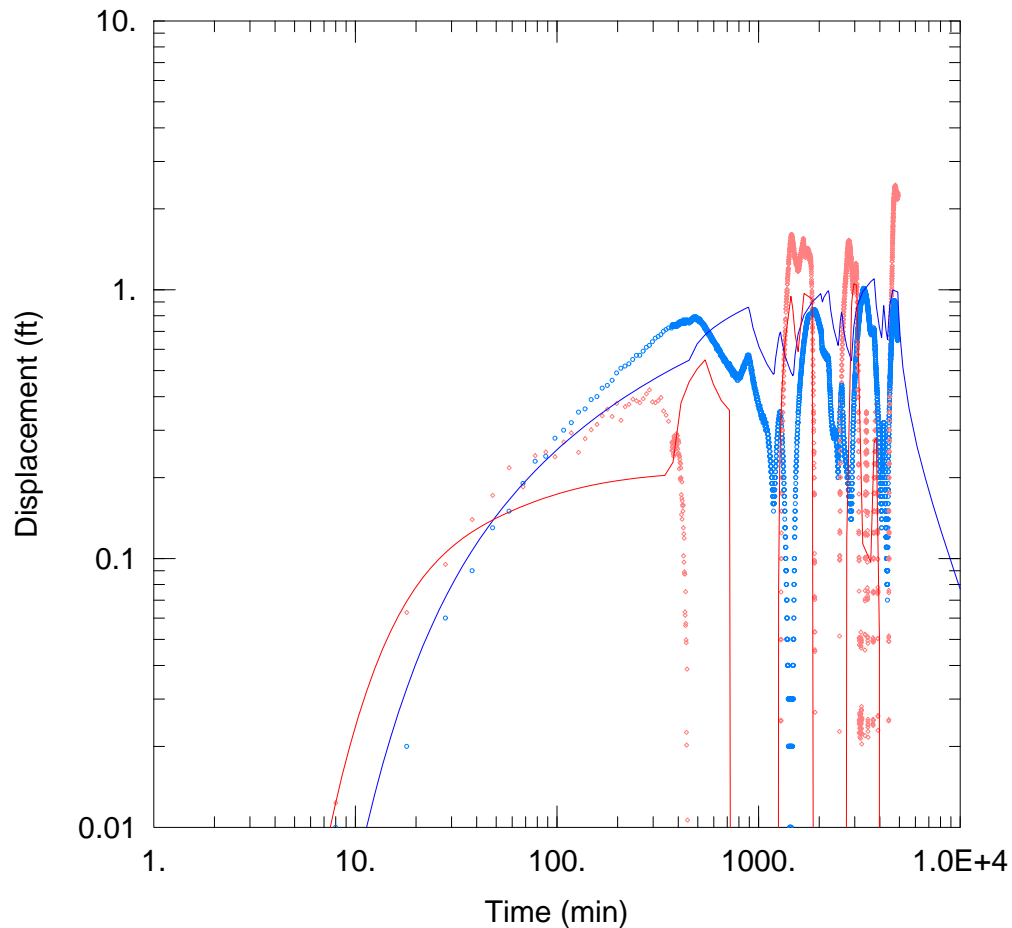
T = 3.6E+4 ft²/day

S = 0.0004336

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



SVP-2 PORT 4, EW PUMPING

Data Set: C:\...\SVP-2-4-EW_Pump_Test-HJ.aqt

Date: 06/24/11

Time: 16:57:17

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.01	186070.8029
<u>EW-1I</u>	2105927.51	186080.2383
<u>EW-1D</u>	2105923.01	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-2-4</u>	2106214.41	187385.7231

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

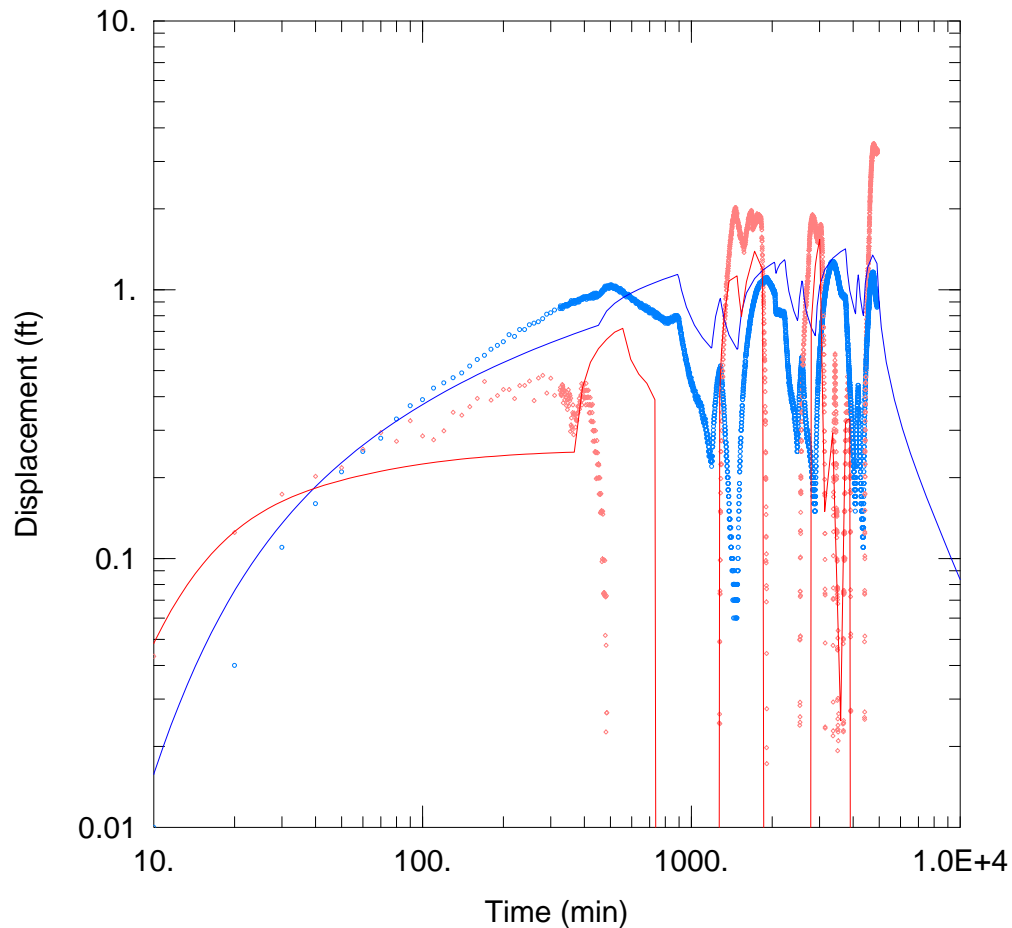
T = 6.68E+4 ft²/day

S = 0.001531

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



SVP-3 PORT 3, EW PUMPING

Data Set: C:\...\SVP-3-3-EW_Pump_Test-HJ.aqt

Date: 06/24/11

Time: 23:45:40

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.0	186070.8029
<u>EW-1I</u>	2105927.5	186080.2383
<u>EW-1D</u>	2105923.0	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-3-3</u>	2106542.3	186966.005

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

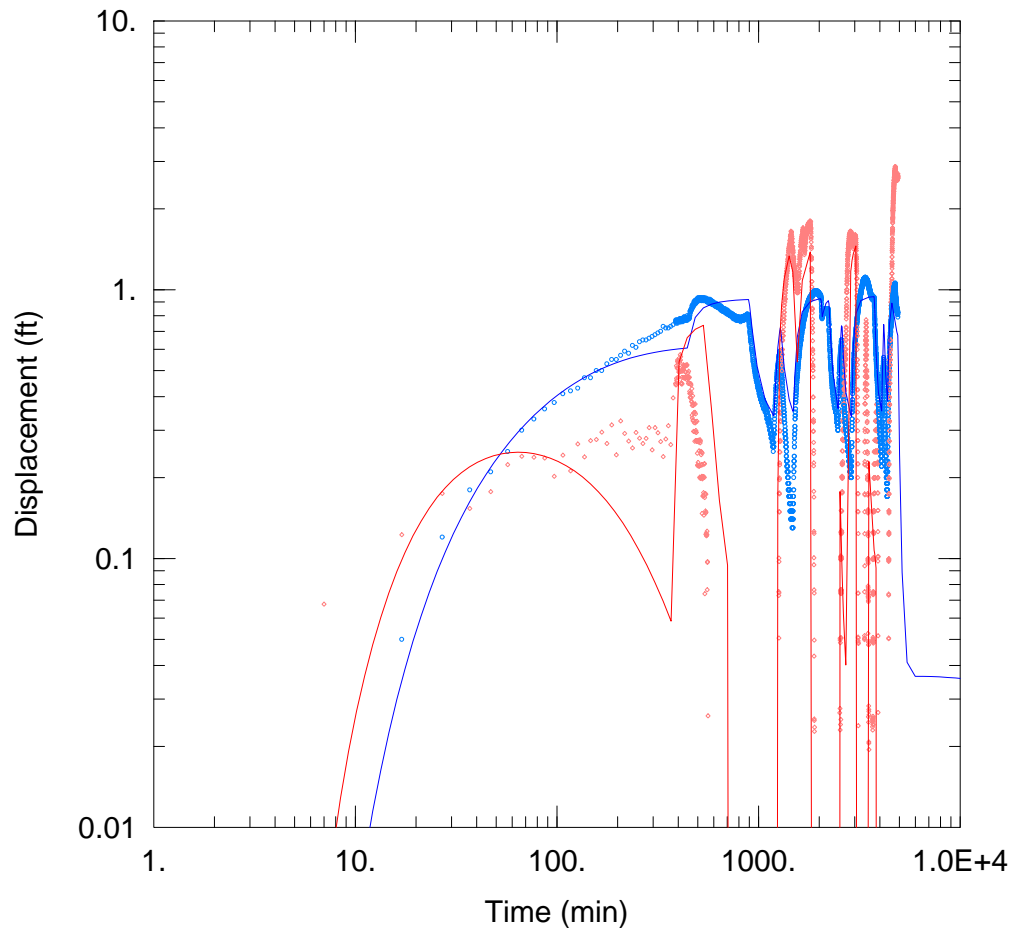
T = 5.543E+4 ft²/day

S = 0.001375

r/B = 0.1

Kz/Kr = 0.01

b = 452. ft



SVP-4 PORT 6, EW PUMPING

Data Set: C:\...\SVP-4-6-EW_Pump_Test-NU.aqt

Date: 06/26/11

Time: 17:03:18

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

AQUIFER DATA

Saturated Thickness: 452. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	<u>2105573</u>	<u>185553</u>
<u>EW-1S</u>	<u>2105932.0</u>	<u>186070.8029</u>
<u>EW-1I</u>	<u>2105927.5</u>	<u>186080.2383</u>
<u>EW-1D</u>	<u>2105923.0</u>	<u>186089.3509</u>

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-4-6</u>	<u>2105820.7</u>	<u>186882.689</u>

SOLUTION

Aquifer Model: Unconfined

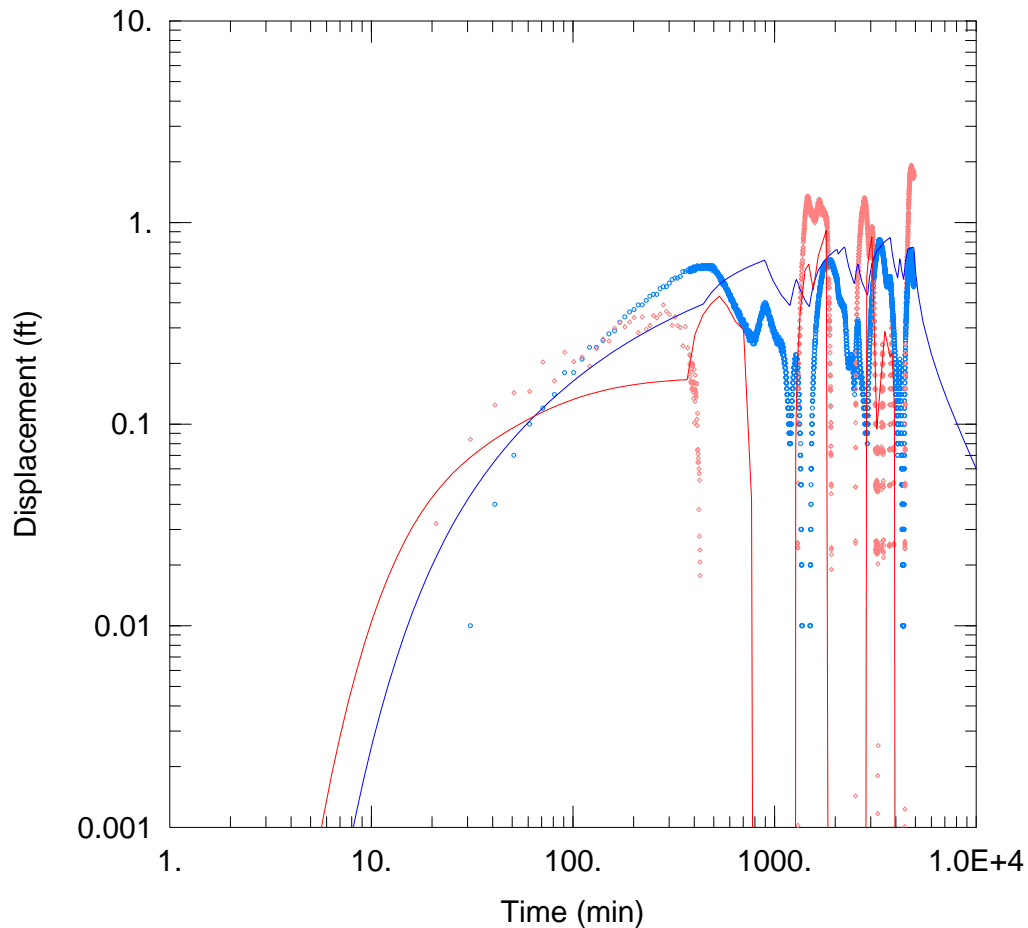
Solution Method: Neuman

T = 1.813E+4 ft²/day

S = 0.0008573

Sy = 0.5

β = 0.3149



SVP-9 PORT 5, EW PUMPING

Data Set: C:\...\SVP-9-5-EW_Pump_Test.-HJaqt.aqt

Date: 06/26/11

Time: 11:58:54

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: EW Pump Test

Test Date: 9/7-10/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
<u>GWP-10</u>	2105573	185553
<u>EW-1S</u>	2105932.01	186070.8029
<u>EW-1I</u>	2105927.51	186080.2383
<u>EW-1D</u>	2105923.01	186089.3509

Observation Wells

Well Name	X (ft)	Y (ft)
<u>SVP-9-5</u>	2105956.76	187687.257

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

T = 8.243E+4 ft²/day

S = 0.001421

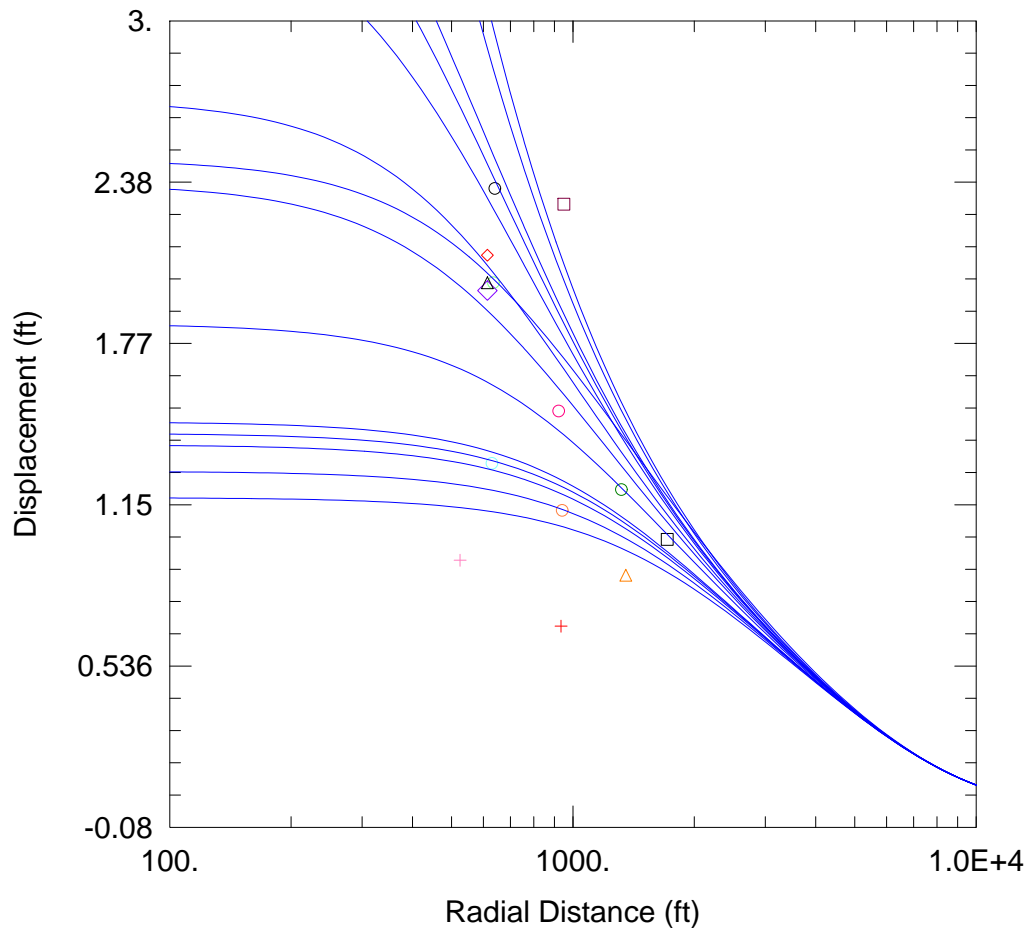
r/B = 0.1

Kz/Kr = 0.01

b = 452. ft

Appendix I

GWP-10 Pumping Well Data Analyses



MULTIPLE WELLS, GWP-10 PUMPING

Data Set: C:\...\Distance_Drawdown_All-Points_GWP-10_Pumping-HJ.aqt

Date: 06/22/11

Time: 13:11:03

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

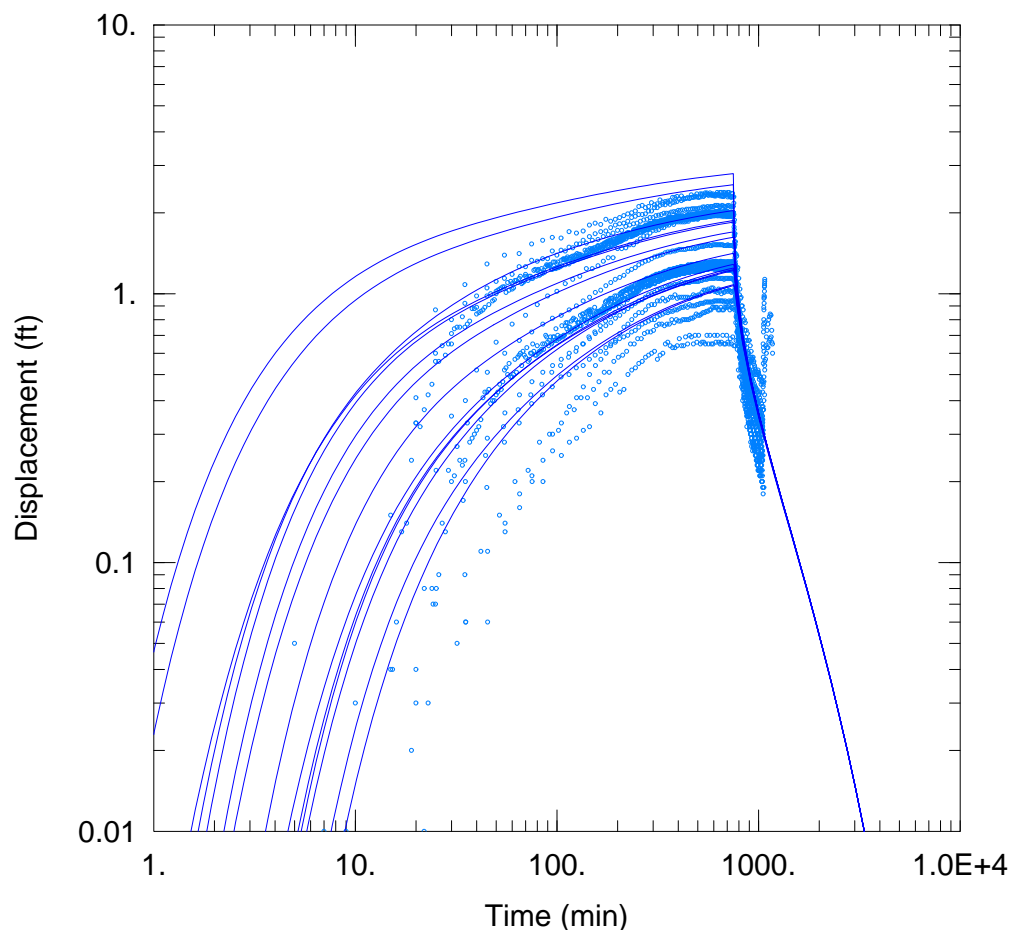
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
○ EW-1D	2105923.0	186089.350
○ EW-1I	2105927.5	186080.238
○ EW-1S	2105932.0	186070.802
+ GWX-10019	2105876.5	185981.259
+ GWX-10020	2106480.13	185775.454
○ MW-1S	2106106.4	186328.080
○ MW-1I	2106083.1	186321.746
○ MW-2I	2106564.0	186423.590
□ SVP-3-3	2106542.3	186966.005
△ SVP-4-6	2105820.7	186882.689
◇ SVP-10-1	2105899.1	186072.675
◇ SVP-10-3	2105899.1	186072.675
△ SVP-10-5	2105899.1	186072.675
□ SVP-11-2	2105507.0	184603.025



MULTIPLE WELLS, GWP-10 PUMPING

Data Set: C:\...\Multiple_Wells_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:54:07

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

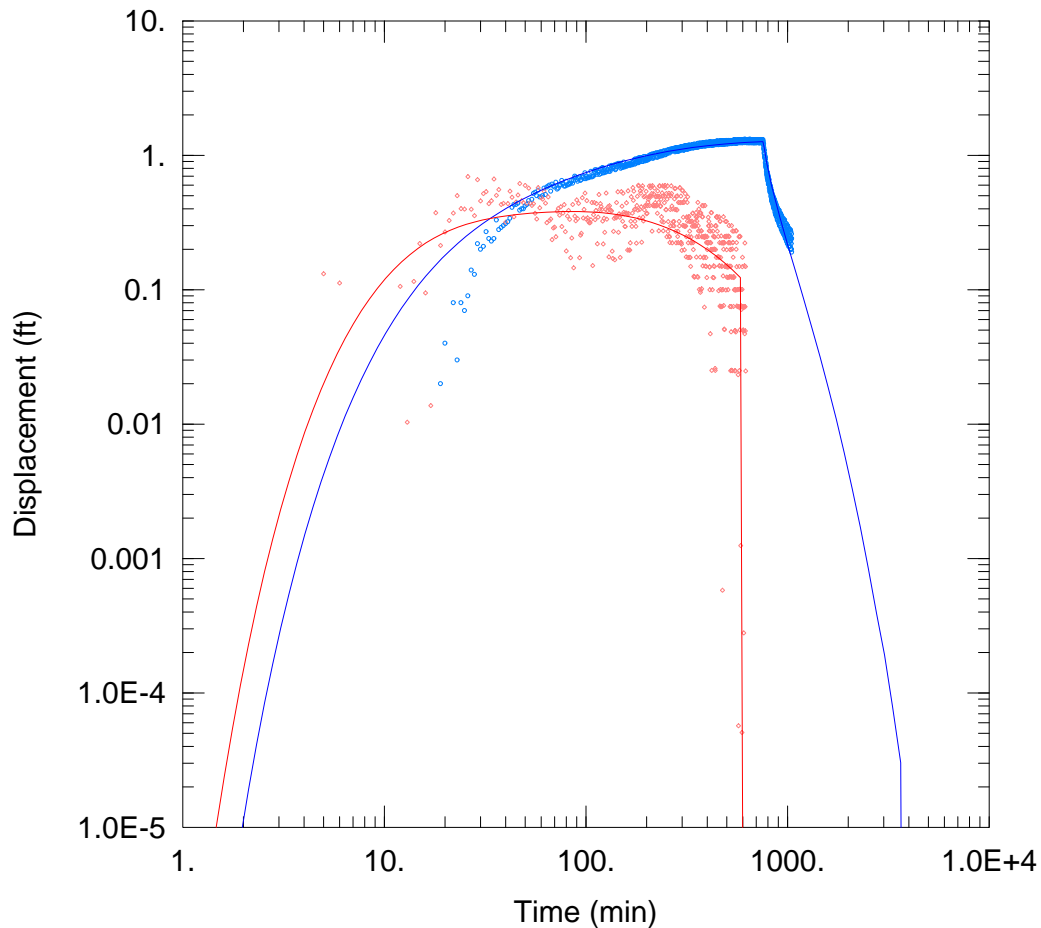
WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
EW-1D	2105923.0	186089.350
EW-1I	2105927.5	186080.238
EW-1S	2105932.0	186070.802
GWX-10019	2105876.5	185981.259
GWX-10020	2106480.13	185775.454
MW-1S	2106106.4	186328.080
MW-1I	2106083.1	186321.746
MW-2I	2106564.0	186423.590
SVP-3-3	2106542.3	186966.005
SVP-4-6	2105820.7	186882.689
SVP-10-1	2105899.1	186072.675
SVP-10-3	2105899.1	186072.675
SVP-10-5	2105899.1	186072.675
SVP-11-2	2105507.0	184603.025



EW-1S, GWP-10 PUMPING

Data Set: C:\...\EW-1S_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:10:09

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
EW-1S	2105932.0	186070.802

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

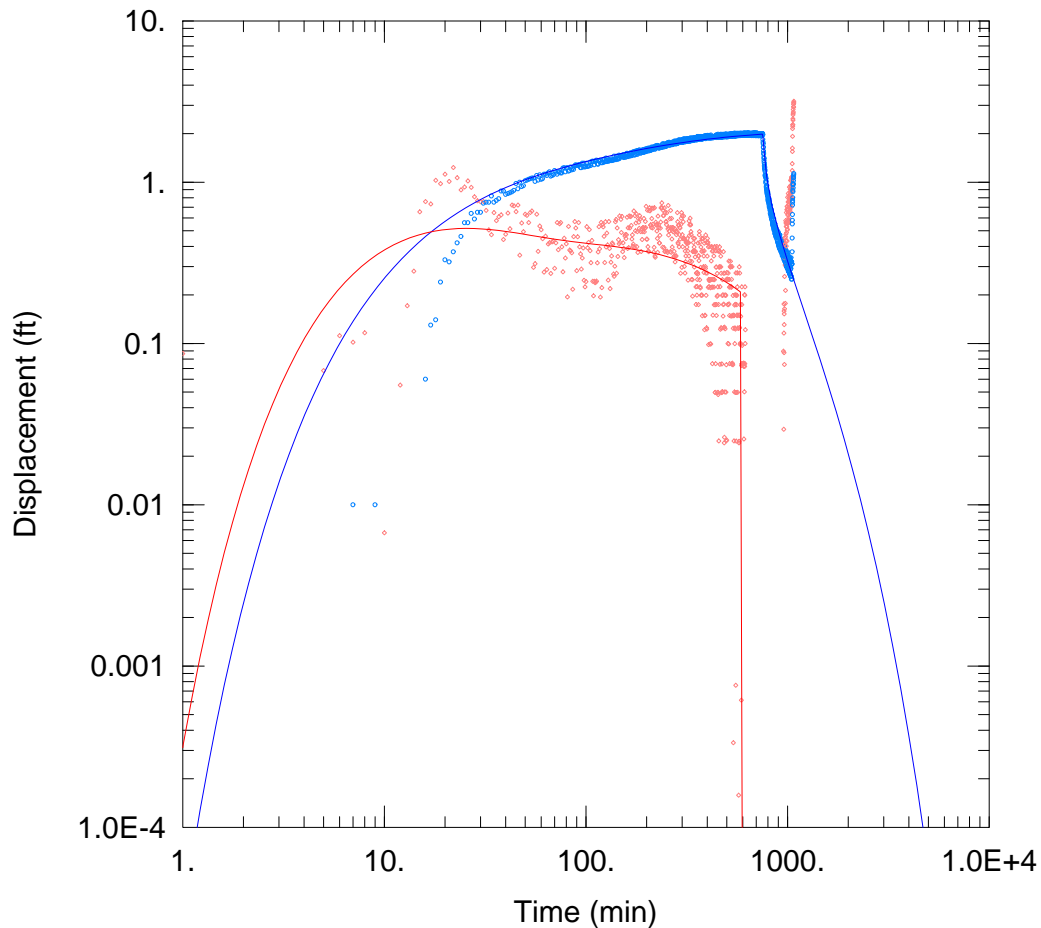
T = 2.618E+4 ft²/day

S = 0.000658

r/B = 0.1958

Kz/Kr = 0.01

b = 452. ft



EW-1I, GWP-10 PUMPING

Data Set: C:\...\EW-1I_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:02:25

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
EW-1I	2105927.5	186080.238

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

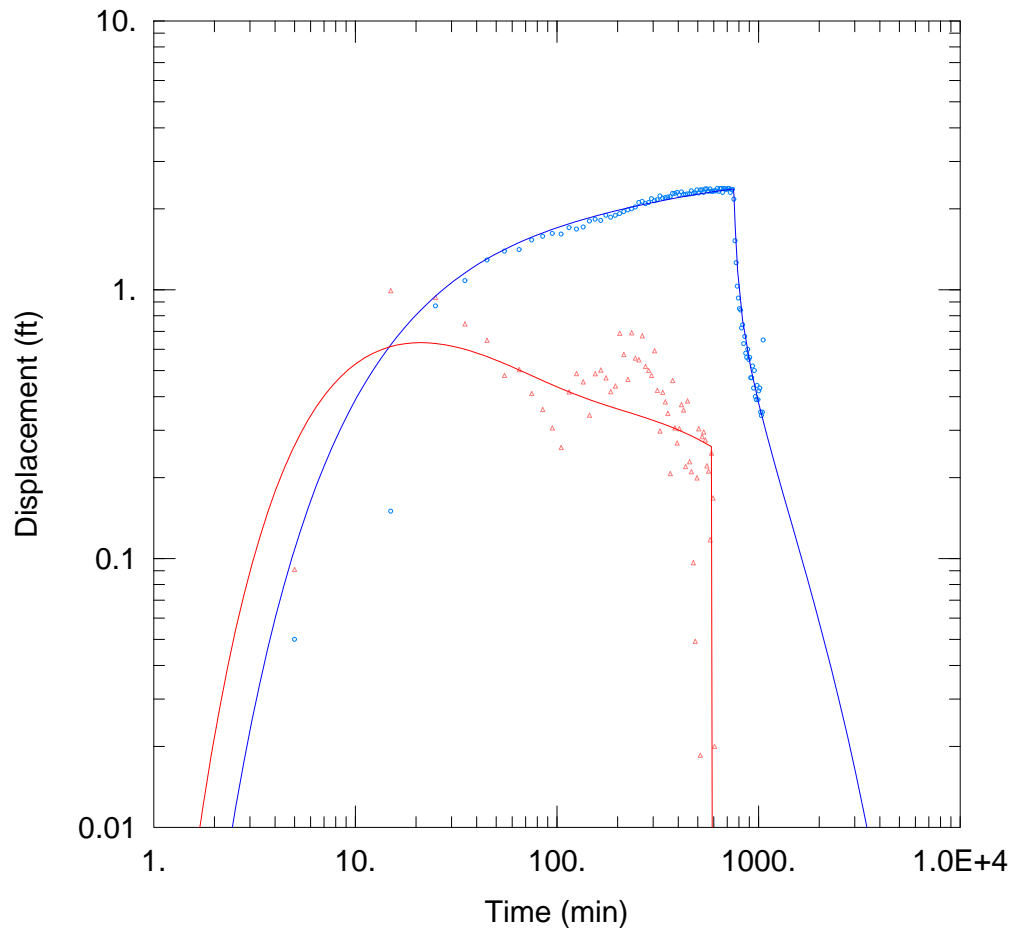
T = 2.856E+4 ft²/day

S = 0.000949

r/B = 0.1756

Kz/Kr = 0.01

b = 452. ft



EW-1D, GWP-10 PUMPING

Data Set: C:\...\EW-1D_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 21:59:42

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
EW-1D	2105923.0	186089.350

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

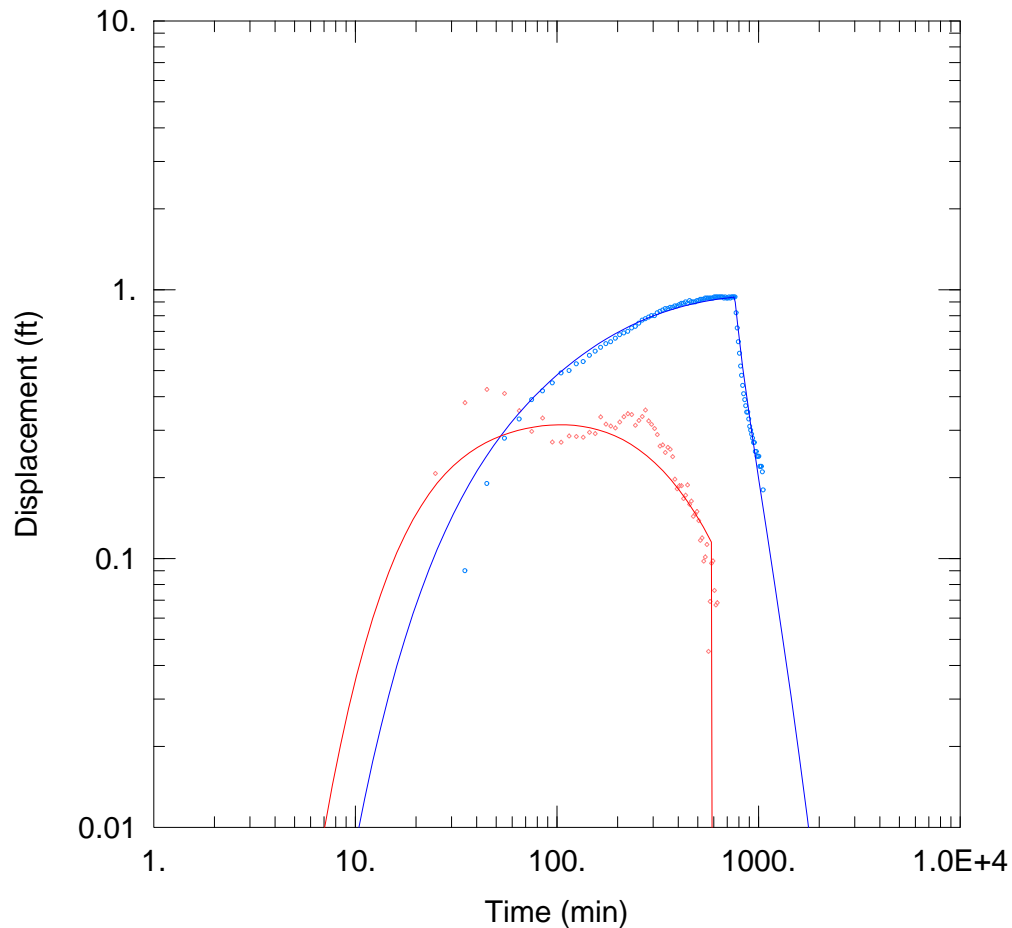
T = 3.736E+4 ft²/day

S = 0.002363

r/B = 0.1682

Kz/Kr = 0.01

b = 452. ft



GWX-10019, GWP-10 PUMPING

Data Set: C:\...\GWX-10019-GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:12:26

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• GWX-10019	2105876.5	185981.259

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

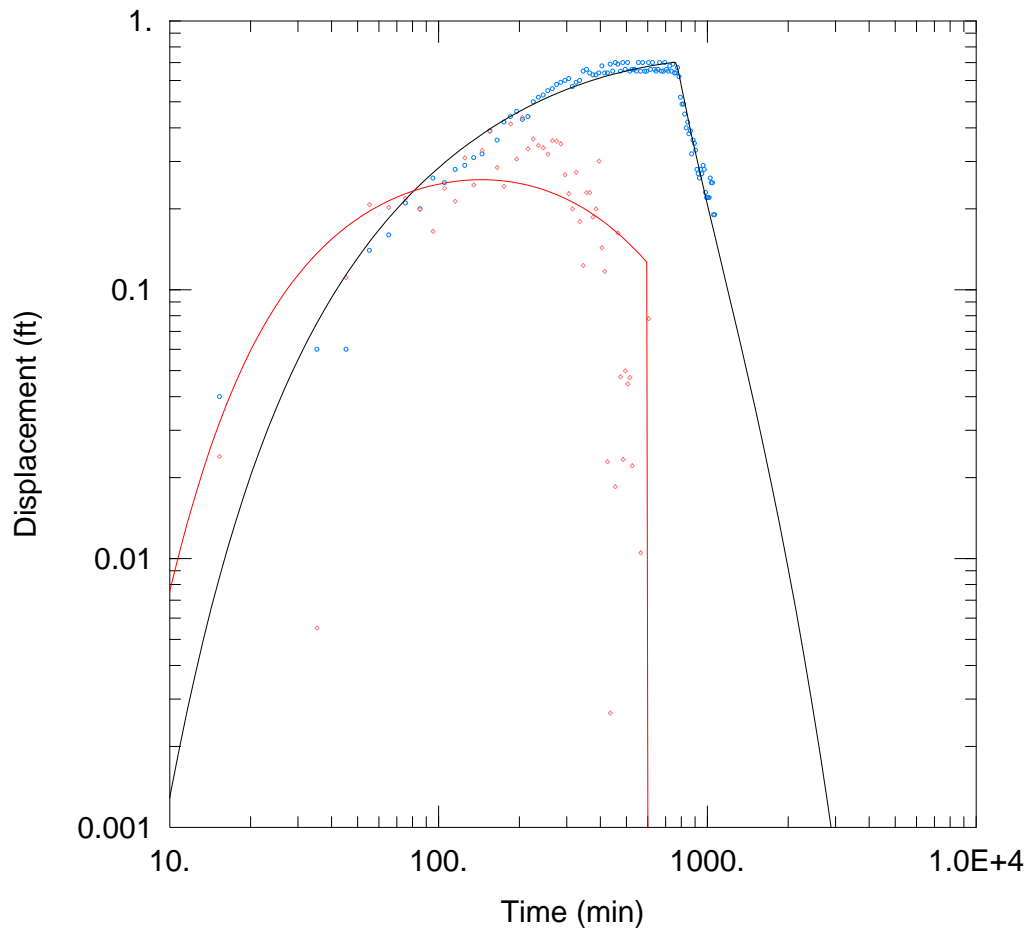
T = 2.968E+4 ft²/day

S = 0.0009774

r/B = 0.1831

Kz/Kr = 0.01

b = 452. ft



GWX-10020, GWP-10 PUMPING

Data Set: C:\...\GWX-10020-GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:13:37

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• GWX-10020	2106480.13	185775.454

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

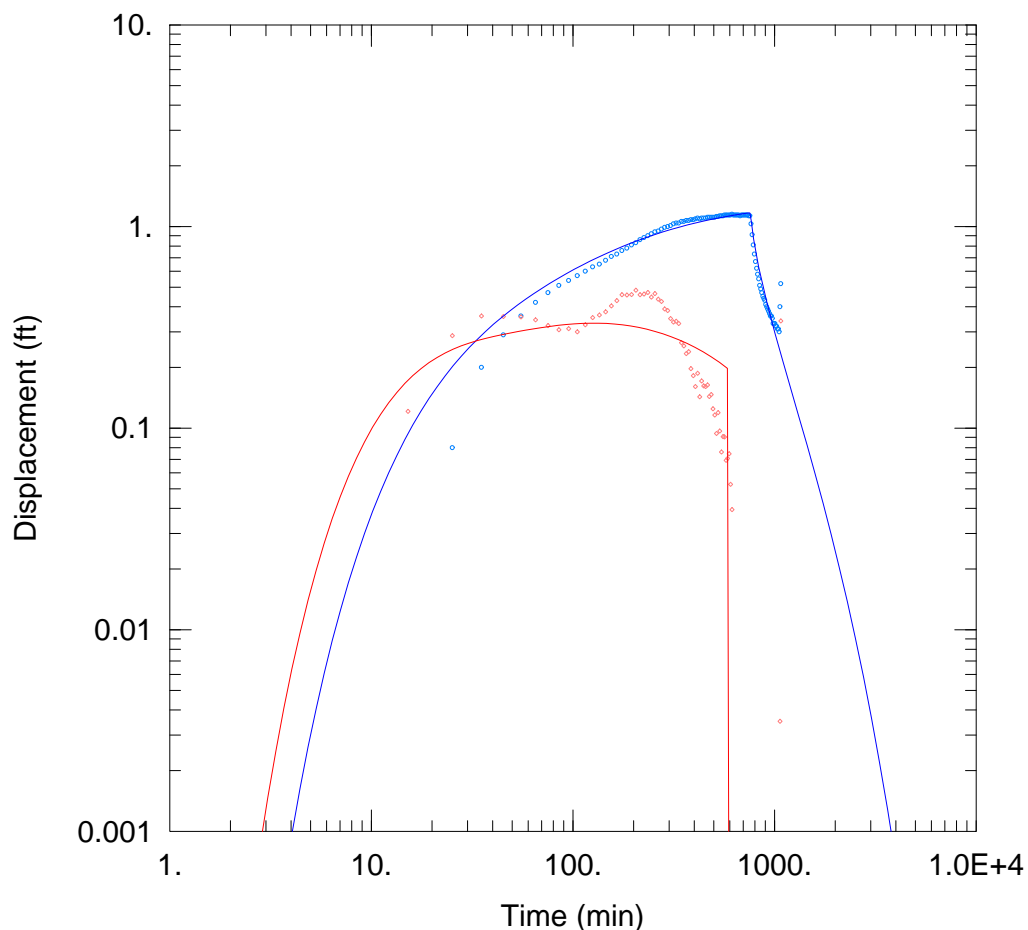
T = 3.688E+4 ft²/day

S = 0.00114

r/B = 0.2764

Kz/Kr = 0.01

b = 452. ft



MW-1S, GWP-10 PUMPING

Data Set: C:\...\MW-1S_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:29:38

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
MW-1S	2106106.4	186328.08

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

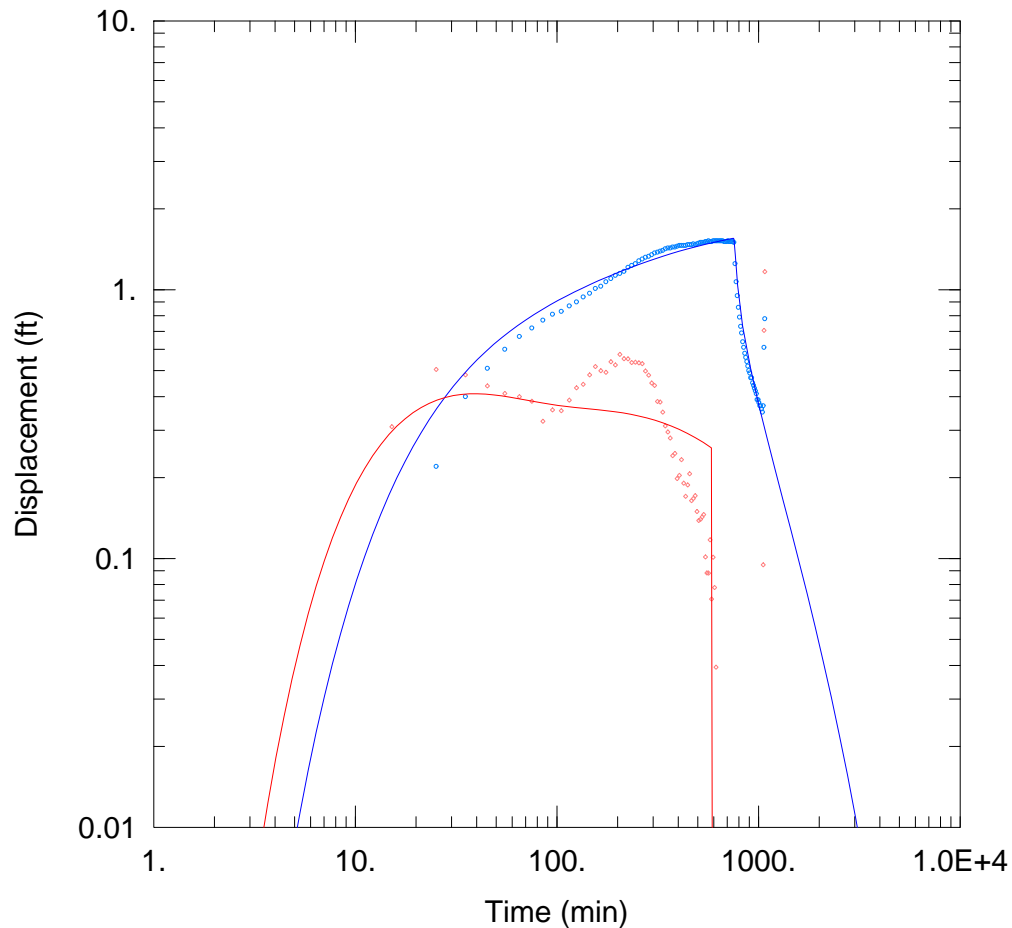
T = 3.447E+4 ft²/day

S = 0.0007684

r/B = 0.1967

Kz/Kr = 0.01

b = 452. ft



MW-1I, GWP-10 PUMPING

Data Set: C:\...\MW-1I_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:21:26

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• MW-1I	2106083.14	186321.746

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

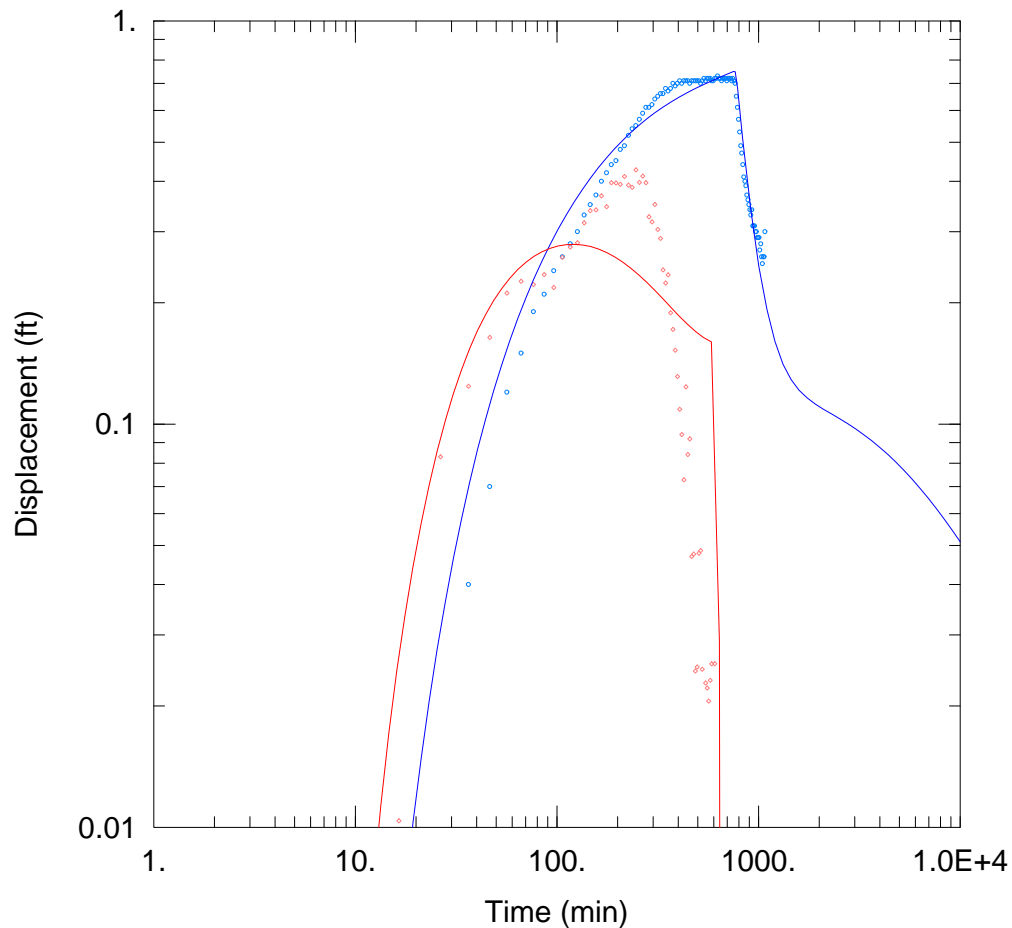
T = 3.327E+4 ft²/day

S = 0.001356

r/B = 0.2179

Kz/Kr = 0.01

b = 452. ft



MW-2S, GWP-10 PUMPING

Data Set: C:\...\MW-2S_GWP-10_Pumping-NU.aqt

Date: 06/26/11

Time: 22:41:19

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

AQUIFER DATA

Saturated Thickness: 452. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• MW-2S	2106577.52	186411.529

SOLUTION

Aquifer Model: Unconfined

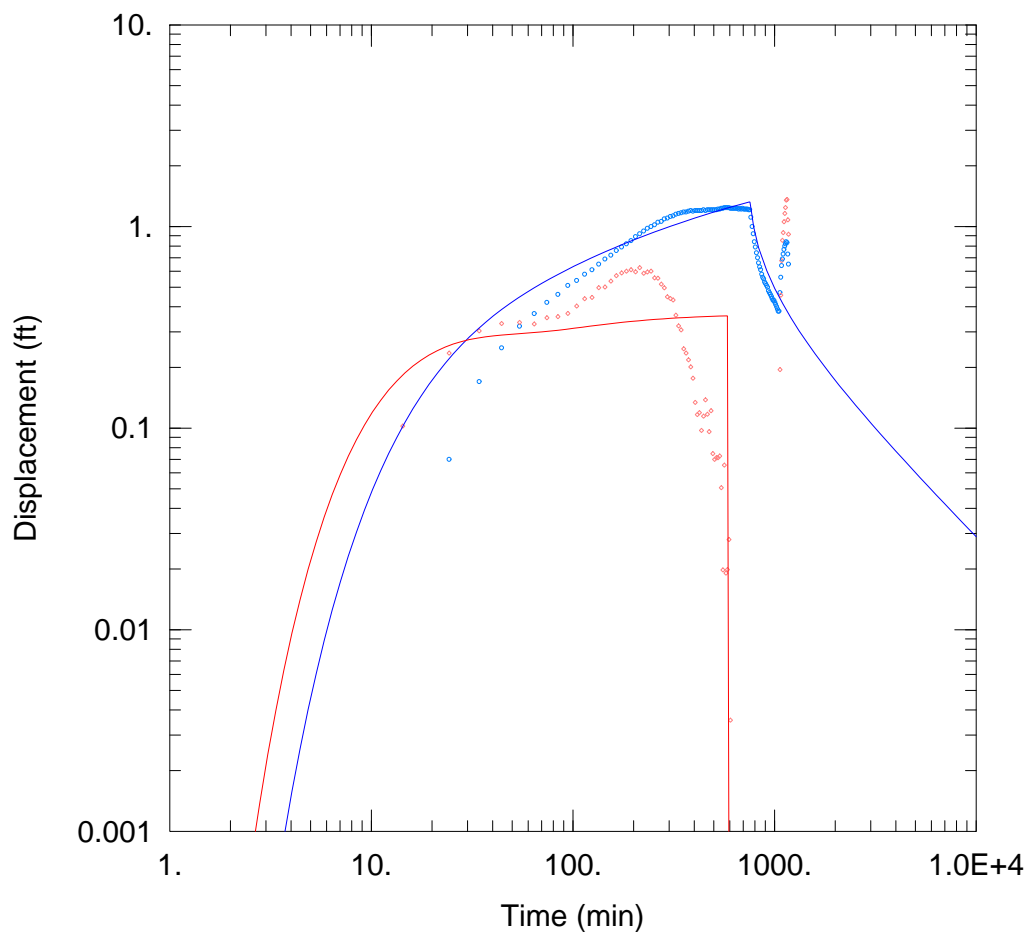
Solution Method: Neuman

$T = 1.877E+4 \text{ ft}^2/\text{day}$

$S = 0.001625$

$S_y = 0.02032$

$\beta = 0.3207$



MW-2I, GWP-10 PUMPING

Data Set: C:\...\MW-2I_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 22:35:15

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• MW-2I	2106564.0	186423.590

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

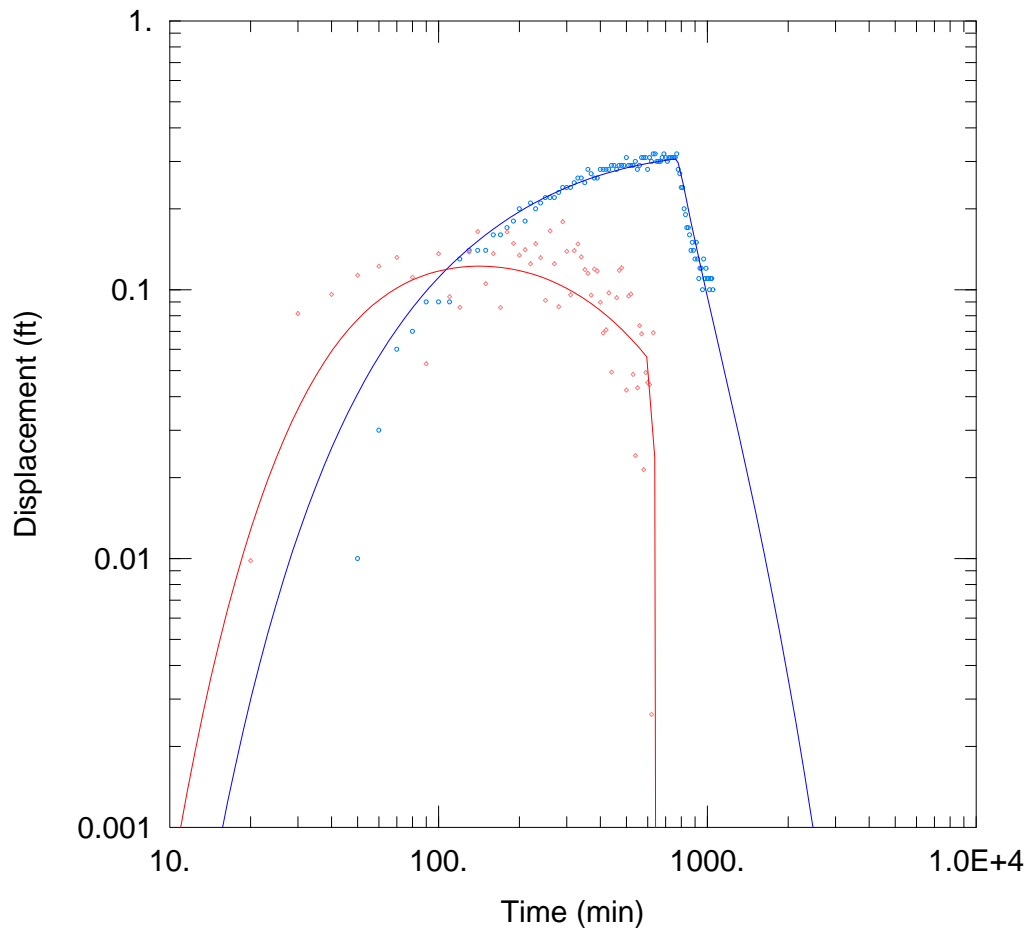
T = 4.122E+4 ft²/day

S = 0.001159

r/B = 1.0E-5

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 8, GWP-10 PUMPING

Data Set: C:\...\SVP-10-8_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:50:20

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• SVP-10-8	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

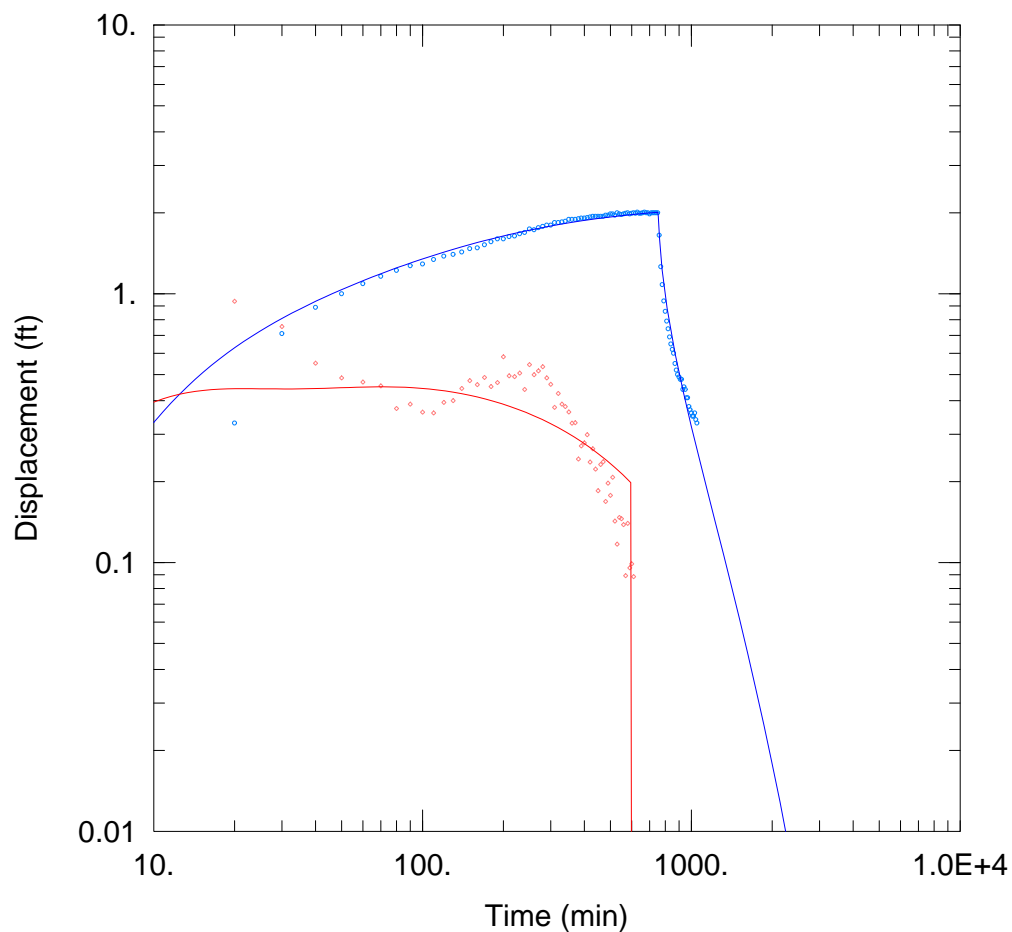
T = 7.719E+4 ft²/day

S = 0.002353

r/B = 0.1866

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 5, GWP-10 PUMPING

Data Set: C:\...\SVP-10-5_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:34:46

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-10-5	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

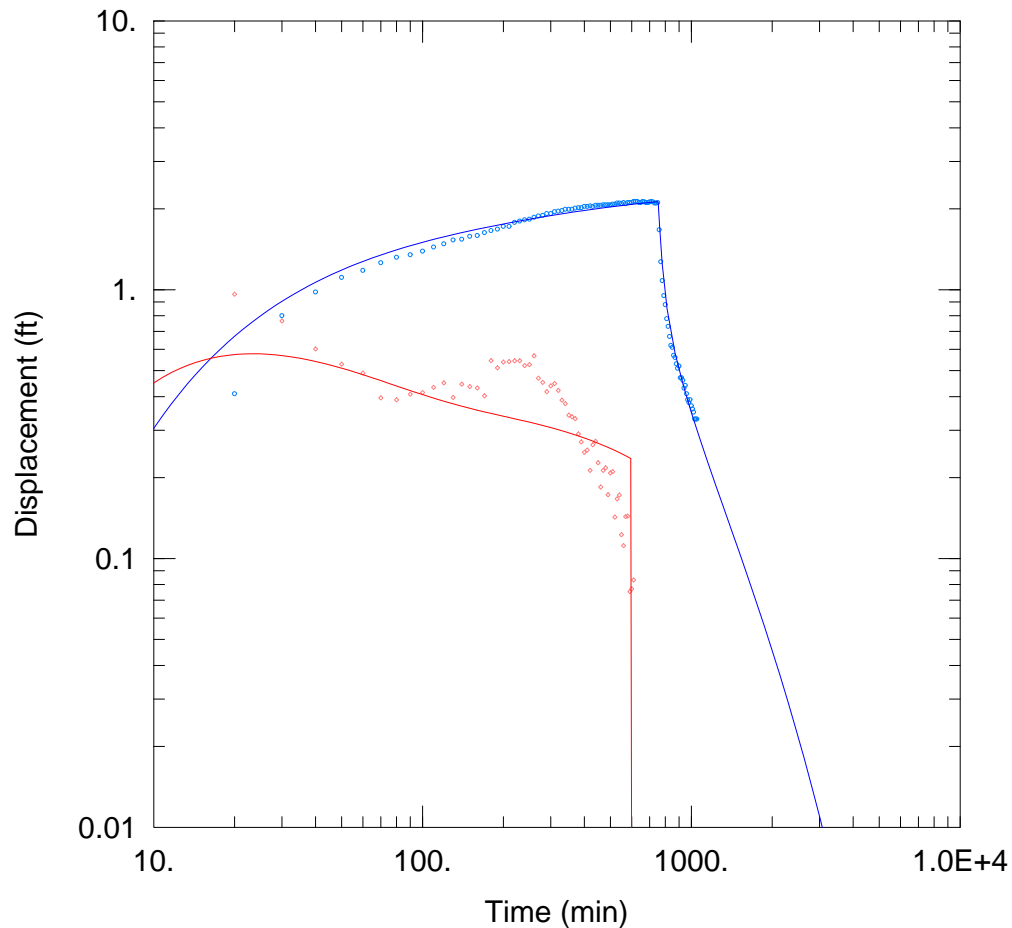
T = 2.756E+4 ft²/day

S = 0.0003925

r/B = 0.1154

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 3, GWP-10 PUMPING

Data Set: C:\...\SVP-10-3_GWP-10_Pumping_HJ.aqt

Date: 06/21/11

Time: 23:32:55

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-10-3	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

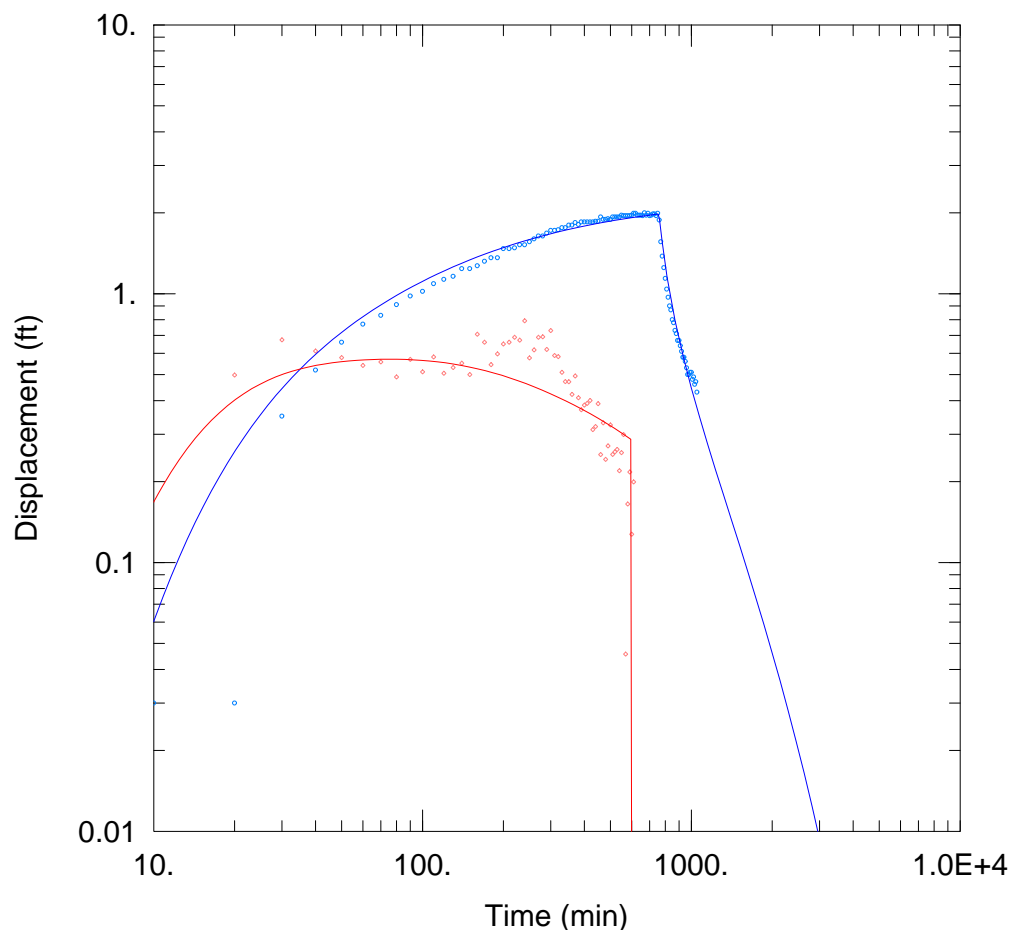
T = 3.702E+4 ft²/day

S = 0.002155

r/B = 0.1705

Kz/Kr = 0.01

b = 452. ft



SVP-10 PORT 1, GWP-10 PUMPING

Data Set: C:\...\SVP-10-1_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:30:53

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-10-1	2105899.1	186072.675

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

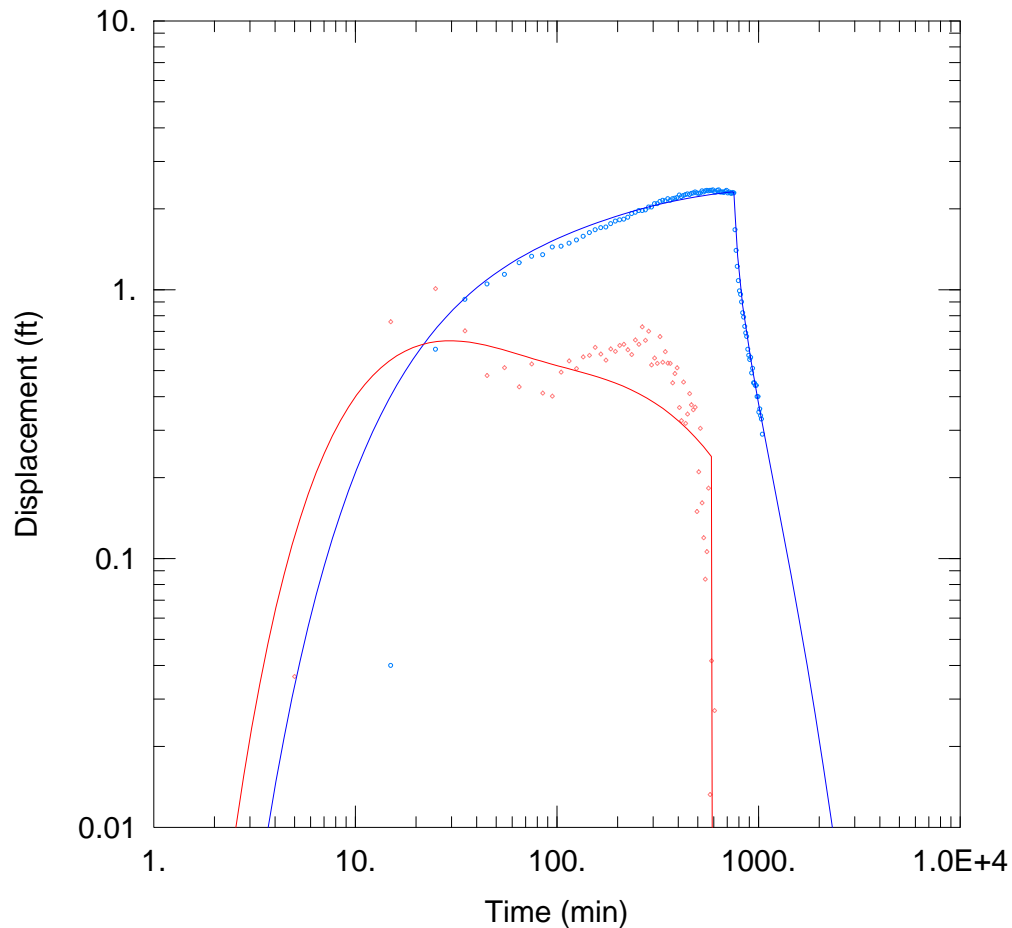
T = 2.818E+4 ft²/day

S = 0.001847

r/B = 0.1966

Kz/Kr = 0.01

b = 452. ft



SVP-11 PORT 2, GWP-10 PUMPING

Data Set: C:\...\SVP-11-2_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:57:44

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: SVP-11-2

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
• SVP-11-2	2105597.0	184603.935

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

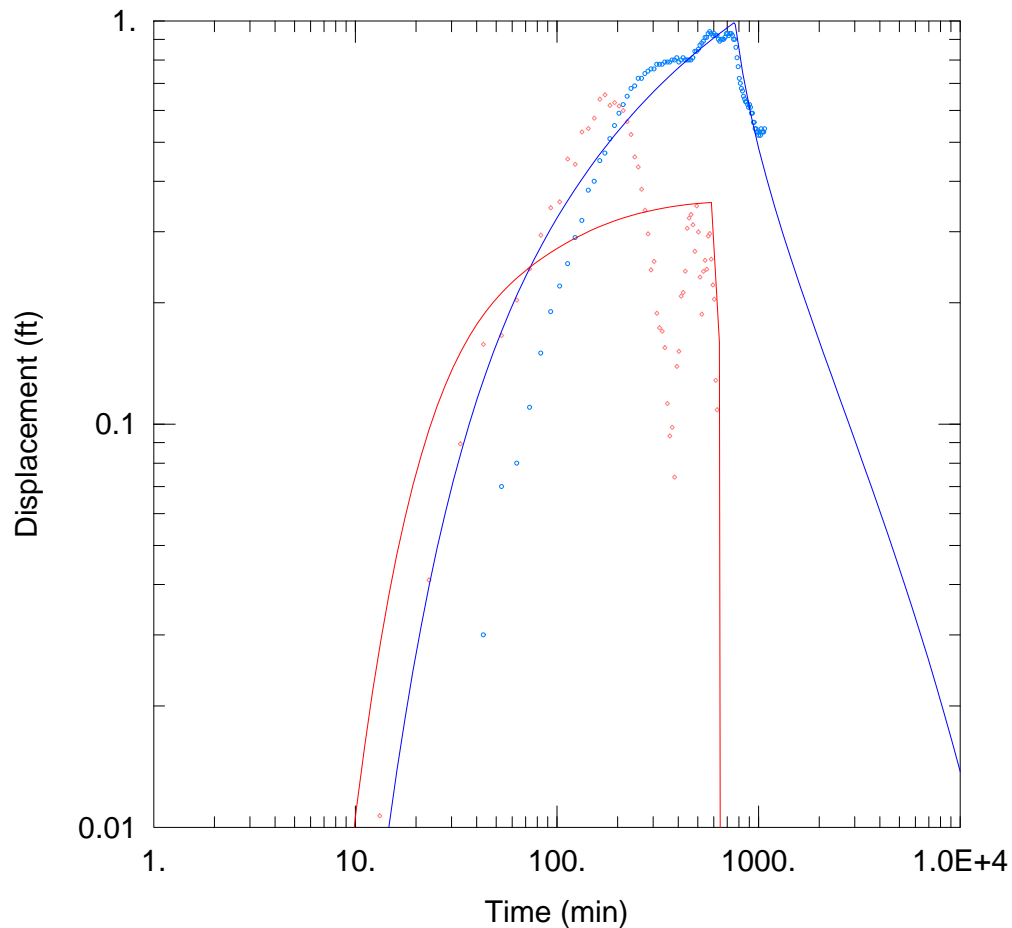
T = 2.28E+4 ft²/day

S = 0.0008816

r/B = 0.2945

Kz/Kr = 0.01

b = 452. ft



SVP-2 PORT 4, GWP-10 PUMPING

Data Set: C:\...\SVP-2-4_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:03:04

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-2-4	2106214.4	187385.723

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

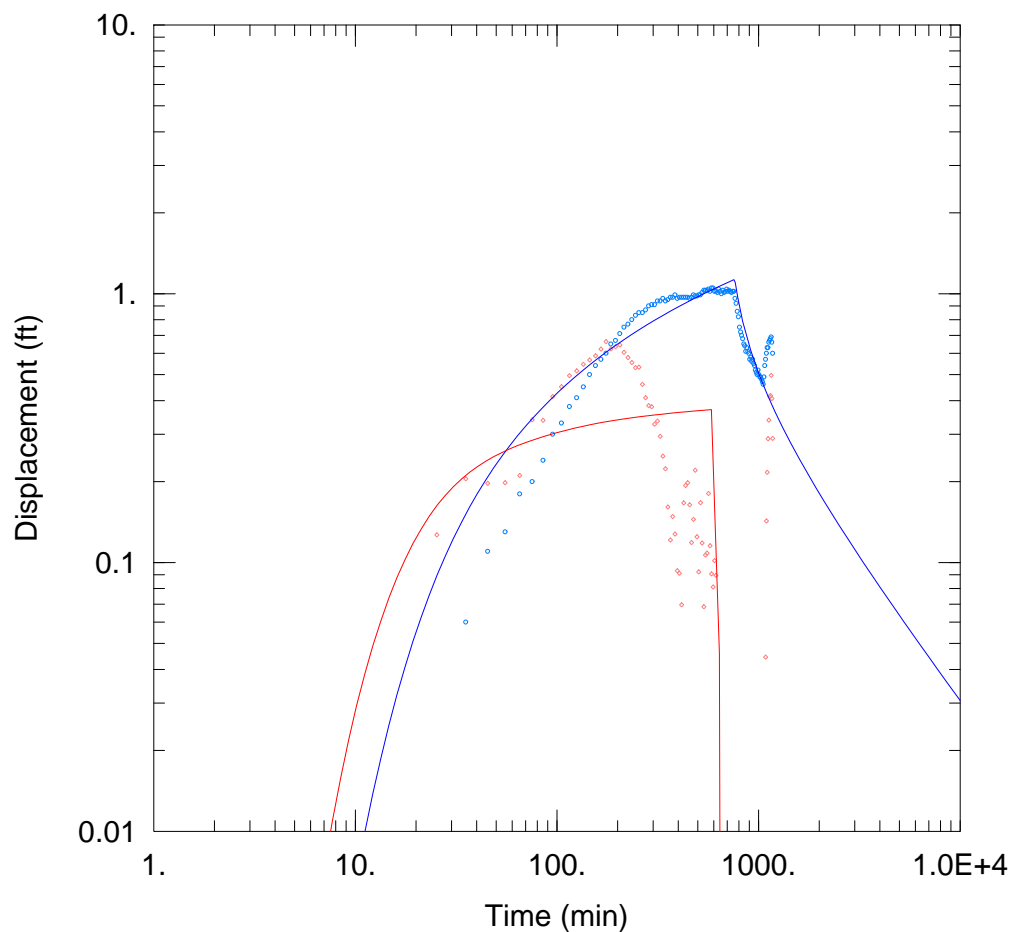
T = 3.788E+4 ft²/day

S = 0.001325

r/B = 0.1276

Kz/Kr = 0.01

b = 452. ft



SVP-3 PORT 3, GWP-10 PUMPING

Data Set: C:\...\SVP-3-3_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:06:12

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-3-3	2106542.3	186966.005

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

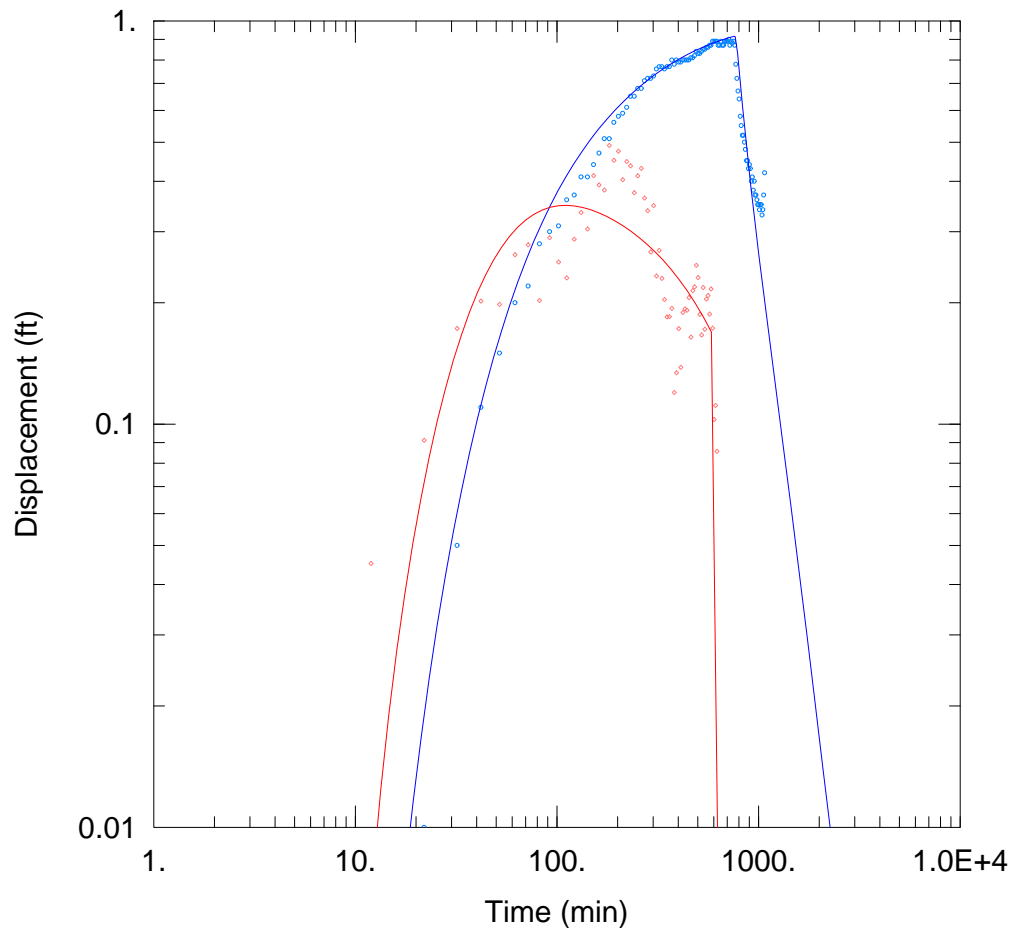
T = 3.881E+4 ft²/day

S = 0.001368

r/B = 1.0E-5

Kz/Kr = 0.01

b = 452. ft



SVP-4 PORT 6, GWP-10 PUMPING

Data Set: C:\...\SVP-4-6_GWP-10_Pumping-NU.aqt

Date: 06/26/11

Time: 22:49:30

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

AQUIFER DATA

Saturated Thickness: 452. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-4-6	2105820.7	186882.689

SOLUTION

Aquifer Model: Unconfined

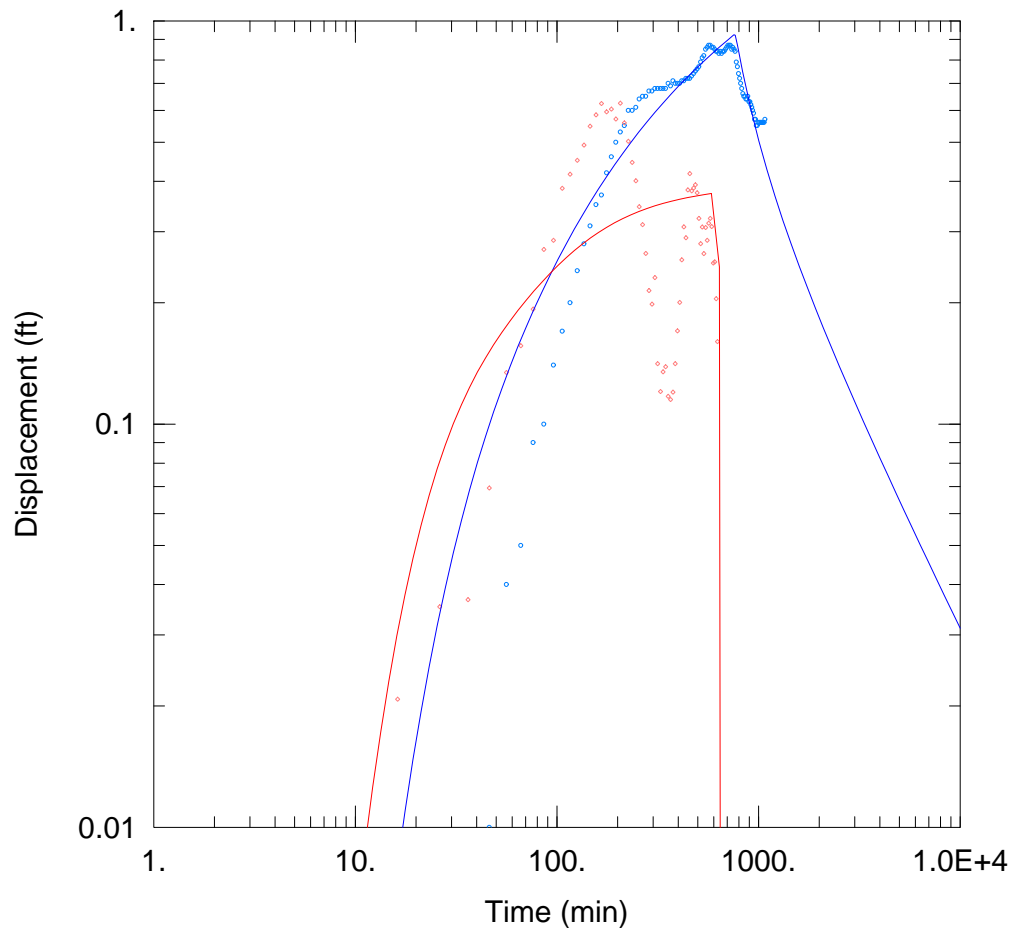
Solution Method: Neuman

$T = 2.06E+4 \text{ ft}^2/\text{day}$

$S = 0.001062$

$S_y = 0.5$

$\beta = 0.1$



SVP-9- PORT 5, GWP-10 PUMPING

Data Set: C:\...\SVP-9-5_GWP-10_Pumping-HJ.aqt

Date: 06/21/11

Time: 23:27:28

PROJECT INFORMATION

Company: CDM

Client: U.S. EPA

Project: 3220-023

Location: Garden City, NY

Test Well: GWP-10

Test Date: 9/7/2010

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
GWP-10	2105573	185553

Observation Wells

Well Name	X (ft)	Y (ft)
SVP-9-5	2105956.76	187687.257

SOLUTION

Aquifer Model: Leaky

Solution Method: Hantush-Jacob

T = 3.814E+4 ft²/day

S = 0.0009566

r/B = 1.0E-5

Kz/Kr = 0.01

b = 452. ft

Appendix J

Simulation of Aquifer Test and Model Refinement Memorandum



Memorandum

To: Project File

From: Dan O'Rourke, Karilyn Heisen and Bob Fitzgerald

Date: April 13, 2011

Subject: Old Roosevelt Field: Simulation of Aquifer Test and Model Refinement

The 72-hour aquifer test that was conducted at the Old Roosevelt Field (ORF) site in Garden City, New York between September 7-10, 2010 was simulated using the ORF groundwater model (CDM, 2007, 2008). The purpose of the simulation was to check the model's response against groundwater head data collected during the aquifer test. The ORF groundwater model was previously calibrated to measured groundwater head data collected in April and July 2006 and was used to evaluate various alternatives for the Feasibility Study (FS). The development of the groundwater model was documented in a technical memorandum dated August 13, 2007, which also serves as Appendix A of the Feasibility Study (FS).

The Record of Decision (ROD) calls for a pump and treat system to remediate a portion of the TCE and PCE plume upgradient of the existing community water supply wells owned and operated by Garden City Water District (Wells 10 and 11). In 2008, the ORF groundwater model was used to site an extraction well system to capture the 100 ppb portion of the plume, while minimizing impacts to head at the Garden City wells, while siting the wells within the property constraints at the time (e.g., within the parking lot). Due to the thickness of the plume, a three well system was recommended, consisting of 50-60 foot screen intervals and spanning a depth from 210 to 410 feet below grade. The total extraction rate was simulated at 250 gpm in which 70 gpm was pumped from the shallow and intermediate wells and 110 gpm was pumped from the deep recovery well.

In the summer of 2010, the extraction well system was installed and an aquifer test was conducted. In addition to the installation of the extraction wells, additional multi-port monitoring wells were installed since the last round of groundwater modeling. Two of these wells were installed within the immediate vicinity of the aquifer test and Garden City supply wells, SVP-10 (located immediately adjacent to the extraction wells) and SVP-11 (just downgradient of the Garden City supply wells). Groundwater head data were collected at these and several other wells within the vicinity (**Figure 1, Table 1**).

Table 1
Wells Monitored for Groundwater Head during 72 Hour Aquifer Test

Monitoring Well	Intervals Monitored (depth, ft)
SVP-02	Port 4 (330-335)
SVP-03	Port 3 (370-375)
SVP-04	Port 6 (245-250)
SVP-09	Port 5 (285-290)
SVP-10	Port 1 (480-485), Port 3 (350-355), Port 5 (285-290), Port 8 (145-150), Port 10 (45-50)
SVP-11	Port 2 (400-405)
MW-01	MW-01i (305-315), MW-01s (235-245)
MW-02	MW-02i (306-316), MW-02s (236-246)
MW-03	MW-03i (304-314), MW-03s (234-244)
N-10019	223-228
N-10020	186-191
EW-01 (extraction well)	EW-01d (350-410), EW-01i (280-340), EW-01s (210-260)

Reference:

Average surface elevation from wells listed above (and Garden City Supply Wells) = 86.6 ft, msl
Garden City Well 10 screen interval = 377-417 feet below grade
Garden City Well 11 screen interval = 370-410 feet below grade

Groundwater Model Simulations

Supply Well Pumping Rates

The objective of the groundwater model simulations was to reproduce observed changes in head from the aquifer test at the various monitoring points. Although actual groundwater supply pumping data was collected at several times for Garden City Well 11 (N-03935) during the aquifer test, it was only estimated at Well 10, as the flow meter was not functional for that well. Estimates were made based on personal communication with the operators from Garden City and operation durations were assumed based on head responses during the test. Well 11 was pumping continuously throughout the duration of the test while Well 10 was generally operated from the early morning hours into the mid-afternoon and again for a brief period in the late evening.

There are numerous groundwater supply wells that surround the site operated by several different water purveyors. Detailed (hourly) pumping data were not available for those wells during the aquifer test. Regional groundwater supply pumping rates were also not available for 2010 at the time of this analysis.

Since 2010 groundwater pumpage data were not available for all wells, the transient groundwater model utilized for the FS and the subsequent design was used for the aquifer test analysis (average pumping and recharge from 2002-2007). Although average pumping and recharge conditions were used regionally, pumping at Garden City wells 10 and 11 was updated to observed conditions during the aquifer test (including pre and post test). However, because average conditions were used

regionally, the actual groundwater head data collected from the monitoring wells was not a calibration target. Rather, the calibration target was observed change in head, which in a sense is independent of actual head (e.g., if a 2 foot decrease in head in a well is observed with starting head at 53 feet, msl and a 2 foot head decline is simulated at a starting head of 55 ft, msl, the model is accurately simulating the aquifer's response to the pumping stress).

Time steps prior, during and after the pump test were reduced to 30 minutes. The pump test was initiated at 10:30 AM on 9/7/2010 and ended on 9/10/2010 at 10:30 AM. The model simulation was run from 12:00 AM on 9/5/2010 until 9/11/2010. Although the actual aquifer test from EW-01 was run for a 72 hour period, groundwater head within the study area is strongly influenced by the operation of the Garden City supply wells. Therefore, evaluating observed head prior to the start of the aquifer test and comparing that to simulated values is essentially a shorter term, cyclic aquifer test.

Stratigraphic Adjustments

Stratigraphy was adjusted to include a coarser zone within the middle Magothy, based on a gamma logging conducted at SVP-10 and a boring log that was developed from split spoon samples collected from the test well installation (**Figures 2 and 3**). With the additional data, correlations with previously collected boring logs enables the vertical extent of this zone to be somewhat defined, although the western extent is unknown due to a lack of geologic data west of Clinton Road. The hydrogeologic properties within the model were adjusted within the study area. A summary of hydrogeologic changes is summarized on **Table 2**.

Simulation Results

Model simulation results are shown on **Figures 4-12** (ordered in general proximity to EW-01 with SVP-10 being the closest and SVP-11 the furthest). The figures are displayed so that the initial response using the calibrated model from the FS is at the top of the figure, followed by two versions of hydraulic conductivity of the sandy zone which was incorporated into the model.

The initial focus of the model calibration was to SVP-10, as this well had numerous ports which were frequently monitored using pressure transducers and is closest to the extraction well (**Figures 4a,4b**). As shown on **Figures 4a and 4b**, the model simulates too much head decline in most of the observed ports using the original hydrogeologic properties from the calibrated model. The model provides a very close match to observed groundwater head in port 5 prior to the aquifer test, but simulates too much decrease in head in that port during the aquifer test. The model simulated too much head decline in all other ports both prior to and during the aquifer test.

In order to address the excessive simulated head decline, the sandy zone that was incorporated into the model was coarsened, as well as some other adjustments (see figures). The middle and bottom set of figures show two versions of this zone, one with a horizontal conductivity (K_h) of 80 ft/day (middle) and one with a relative very high K_h for the Magothy aquifer of 180 ft/day (bottom). Note

Table 2
Wells Monitored for Groundwater Head during 72 Hour Aquifer Test

Hydrogeologic Parameter		Original (FS model)	Adjusted
Upper Magothy	Kh (ft/day)	35	60
	Kv (ft/day)	0.6	0.6
	Sy	0.25	0.15
	Ss (ft ⁻¹)	1 x 10 ⁻⁶	2 x 10 ⁻⁶
Middle Magothy	Kh (ft/day)	40	40
	Kv (ft/day)	0.7	0.7
	Sy	0.25	0.15
	Ss (ft ⁻¹)	1 x 10 ⁻⁶	2 x 10 ⁻⁶
Middle Magothy (coarse zone)	Kh (ft/day)	N/A	80 – 180 ¹
	Kv (ft/day)		2.0
	Sy		0.15
	Ss (ft ⁻¹)		2 x 10 ⁻⁶
Basal Magothy	Kh (ft/day)	60	80
	Kv (ft/day)	1.2	1.2
	Sy	0.25	0.15
	Ss (ft ⁻¹)	1 x 10 ⁻⁶	2 x 10 ⁻⁶
Raritan Clay	Kh (ft/day)	0.3	0.3
	Kv (ft/day)	8 x 10 ⁻⁴	1 x 10 ⁻⁴
	Sy	0.25	0.25
	Ss (ft ⁻¹)	1 x 10 ⁻⁵	1 x 10 ⁻⁵

Note: two simulations were utilized in this evaluation, one using 80 ft/day for the coarser zone and a second using 180 ft/day. Kh = horizontal hydraulic conductivity and Kv = vertical hydraulic conductivity.

that the very high conductivity of 180 ft/day appears to provide the closest match to observed head for all ports of SVP-10, although the simulated response in ports 1 and 5 are better during the background period using a Kh of 80 ft/day.

The results of the aquifer test revealed a complex sequence in which changes in hydraulic conductivity did not have the same effect prior to and during the aquifer test. This is evident by the simulated response of port 5 in SVP-10. In order to match the observed head decline during the aquifer test, the sandy zone within the middle Magothy had to be coarsened to represent a simulated horizontal hydraulic conductivity of 180 ft/day. However, in doing that, the difference between the simulated head change and observed head change during the background period was somewhat increased. Furthermore, the Magothy aquifer generally fines upwards, in which the coarsest zone is within the basal Magothy, representing a high energy environment of deposition. Although it is certainly possible for a coarser zone to be within the middle Magothy, having that zone be more than double the Kh of the basal Magothy is questionable (nor is a coarse sand or gravelly zone noted in the boring logs, but rather fine to medium sand). Furthermore, having this very high horizontal conductivity zone doesn't seem to have a significant improvement on heads at most of the other monitoring wells included in

this analysis. Nevertheless, in order to match the head decline at SVP-10, a relatively very high hydraulic conductivity is required in the model. It is quite possible that this zone is very localized and although a more sandy zone appears to extend throughout the area in the middle Magothy, the hydraulic conductivity of this zone throughout the study area may in fact be closer to the 40-80 ft/day as shown in the top and middle figures. In general, although the higher K_h of 180 ft/d provides a better match to observed data at SVP-10, in some cases there is no significant difference in simulated response between the three variations (particularly for those monitoring points which are further away from the wells).

The head response in other monitoring wells is dominated by the operation of Garden City water supply Well 10 and head responses to the extraction well are masked by its operation. Therefore, the model head responses from surrounding monitoring wells focused on the pre-test pumping period (**Figures 5-12**). Due to the significant influence from the Garden City supply wells, the model target was focused on the pre-test period for wells other than SVP-10.

Further complicating the aquifer test is an interesting phenomenon that is apparent with several of the monitored wells in which the simulated head response prior to the aquifer test is in very good agreement with observed head, but somewhat off during the aquifer test. In many instances, the observed head slowly increases and then increases rapidly (this rapid increase is assumed to be due to Well 10 turning off). It is possible that this initial slow increase is in response to a lower pumping rate at Well 10, which is not reflected in the model. When this initial response is not included in the analysis and simulated head change is measured from a later time (when head is similar to the start of the aquifer test, approximately 5 hours after the start of the test), the simulated response is in much better agreement to the observed response. An example of this is shown on **Figure 13** for SVP-04, for the condition in which the sandy zone incorporated into the middle Magothy has a horizontal hydraulic conductivity of 80 ft/d. Head at SVP-04 was monitored from Port 6, which is above the newly incorporated sandy zone.

Discussion

The aquifer test at the Old Roosevelt Field site involved a significant amount of complexity in which heads were strongly influenced by the municipal supply wells. The extent to which heads were influenced by other wells (other than Garden City wells 10 and 11 and the extraction well), is somewhat unclear, particularly to wells that are further from the extraction well and the two Garden City wells. For example, as shown on **Figure 11**, the simulated and observed head changes for port 5 in SVP-09 indicate a reasonable match between simulated and observed head changes during the first cycle of the background period, however, the observed decrease in head is much higher than simulated during the early morning hours of 9/7/10. It is possible that surrounding water supply wells (non-Garden City) are influencing head in SVP-09 since additional head decline is observed. Surrounding wells may have been pumped at capacity for a period of time and these increased pumping rates at non-Garden City wells are not included in the model as pumping rates and duration data were not available. Further supporting this possibility is the sharp increase in head at the start of

the aquifer test, which may be an indication of one or more of these surrounding wells being shut down.

A calibration check was also conducted, comparing simulations run under the various hydraulic conductivities to observed head in April and July of 2006. For most observation wells, a better match between simulated and observed head was observed with an increase in the transmissivity of the middle portion of the Magothy aquifer. However, the extent to which this increase exists and to what degree remains uncertain. However, model simulations show a reasonable correlation with observed head change at several wells by increasing the horizontal hydraulic conductivity in a sandy zone to 80 ft/d.

Only a few monitoring points show a better correlation with observed head decline using a much higher horizontal hydraulic conductivity of 180 ft/day. There was no significant difference in simulated vs observed head between the original model and incorporating this much more transmissive zone, likely due to the somewhat limited extent to which the sandy zone was incorporated and the regional influence on groundwater head. Overall, however, simulated heads at the SVP wells were in somewhat better agreement with observed heads from the original calibration period (April and July 2006) by incorporating the coarser sandy zone within the middle Magothy.

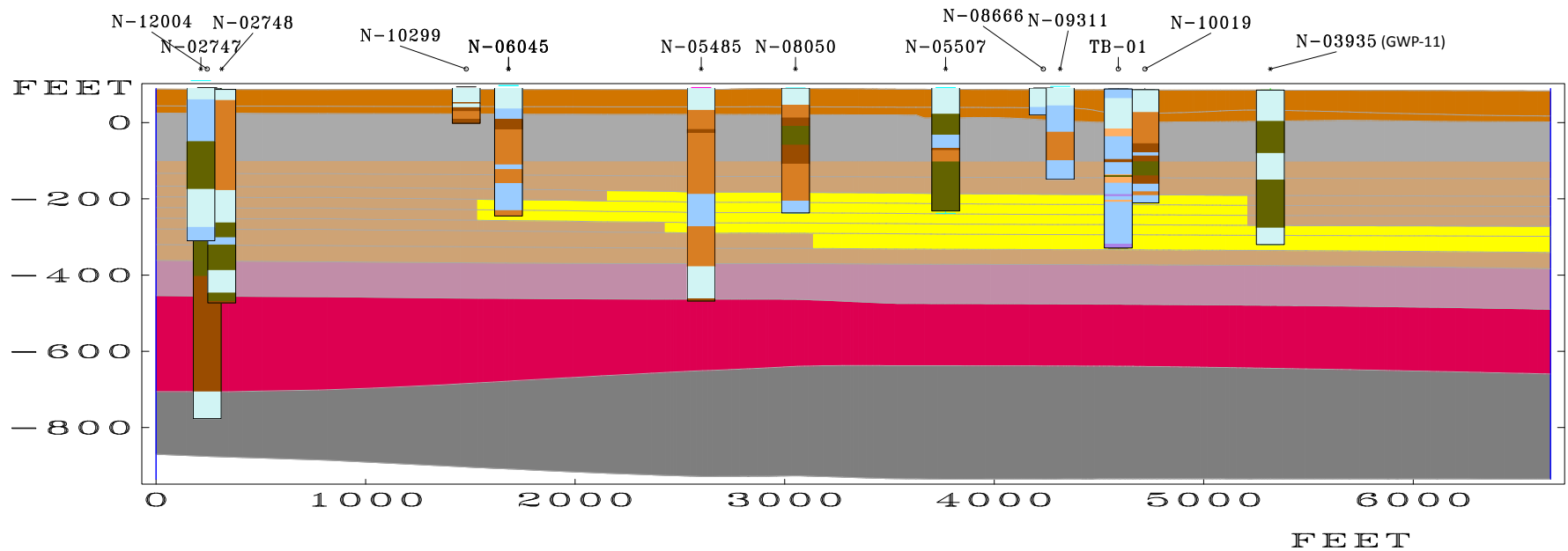
The simulated 15 year groundwater contributing areas to EW-01 are shown on **Figures 14-16** for the original FS model properties as well as the two variations in the sandy zone which was incorporated during this analysis. Simulated pumping rates are 70 gpm in the shallow and intermediate extraction wells and 110 gpm in the deep extraction well, totaling 250 gpm. The simulated capture zone using the higher Kh for the sandy portion of the middle Magothy is somewhat more narrow than the other capture zones and extends slightly further north.

It's important to note that the original design and pumping rates were based on the areal and vertical extent of the TCE/PCE plumes in 2007. It is recommended that an updated plume extent be developed and pumping rates modified accordingly. Should the plume be much deeper than originally depicted, a deeper recovery well may be necessary to achieve capture. In addition, should there no longer be a significant shallow portion of the plume, it's possible that the shallow well may not be needed. **Figure 17** shows the simulated capture zones resulting from pumping the intermediate and deep extraction wells only, at 125 gpm each, respectively. As shown on the figure, a larger portion of the three zones is captured by these two wells. However, if a shallow portion of the plume still exists, then the shallow extraction well will be necessary.

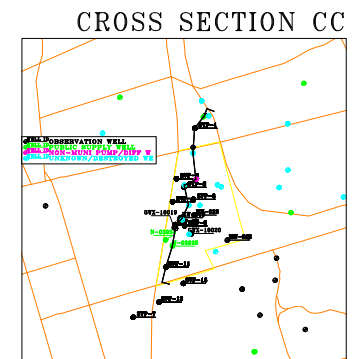
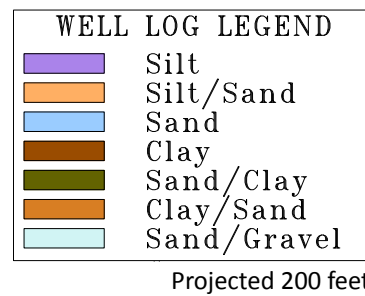
cc: J. Dougherty (CDM)



Figure 1
Wells
Old Roosevelt Field Contaminated Groundwater Site
Nassau County, New York

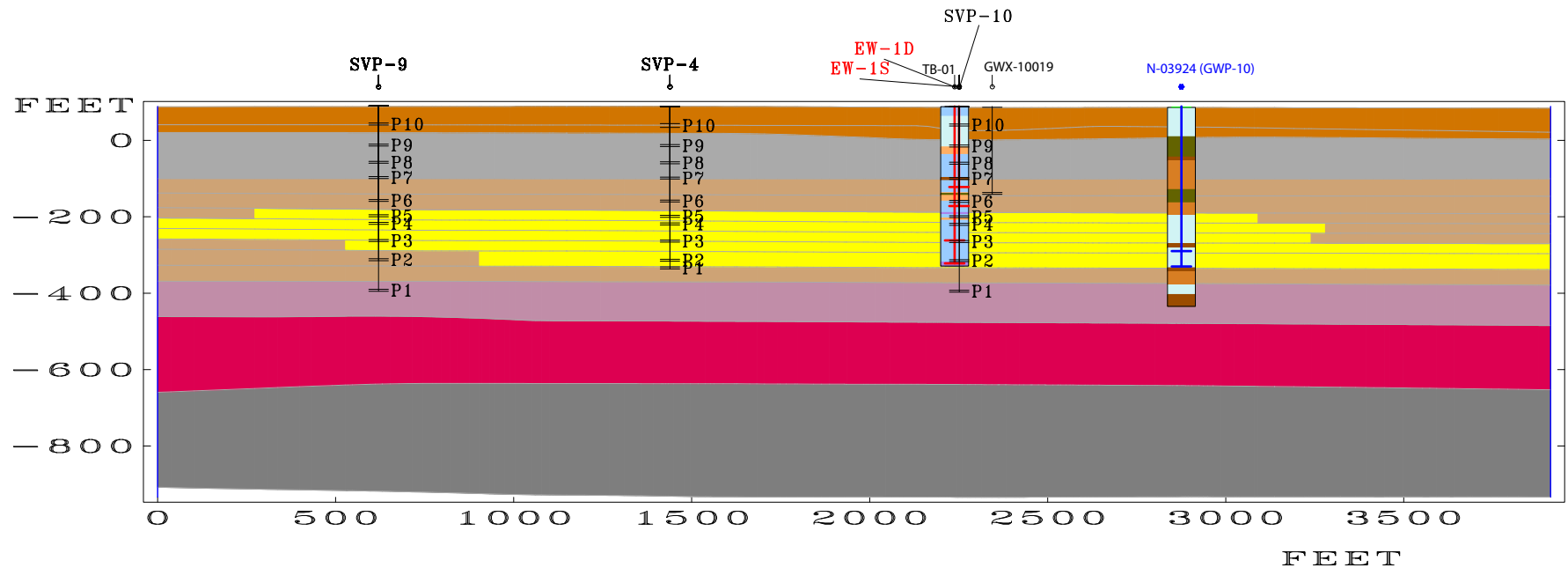


- Upper Glacial Aquifer
- Upper Magothy
- Middle Magothy
- Basal Magothy
- Raritan Clay
- Lloyd Aquifer
- Sandy Layer Incorporated into the Middle Magothy



sa\rf_ss260.sav

Figure 2
Old Roosevelt Field Groundwater Model
Northeast-Southwest Cross Section



- Upper Glacial Aquifer
- Upper Magothy
- Middle Magothy
- Basal Magothy
- Raritan Clay
- Lloyd Aquifer
- Sandy Layer Incorporated into the Middle Magothy

WELL LOG LEGEND	
	Silt
	Silt/Sand
	Sand
	Clay/Sand
	Clay
	Sand/Clay
	Sand/Gravel

- * Well ID
- GROUND SURFACE
- TOP OF SCREEN
- BOTTOM OF SCREEN
- PROJECTED 100 FT

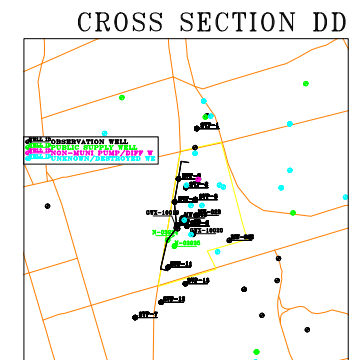
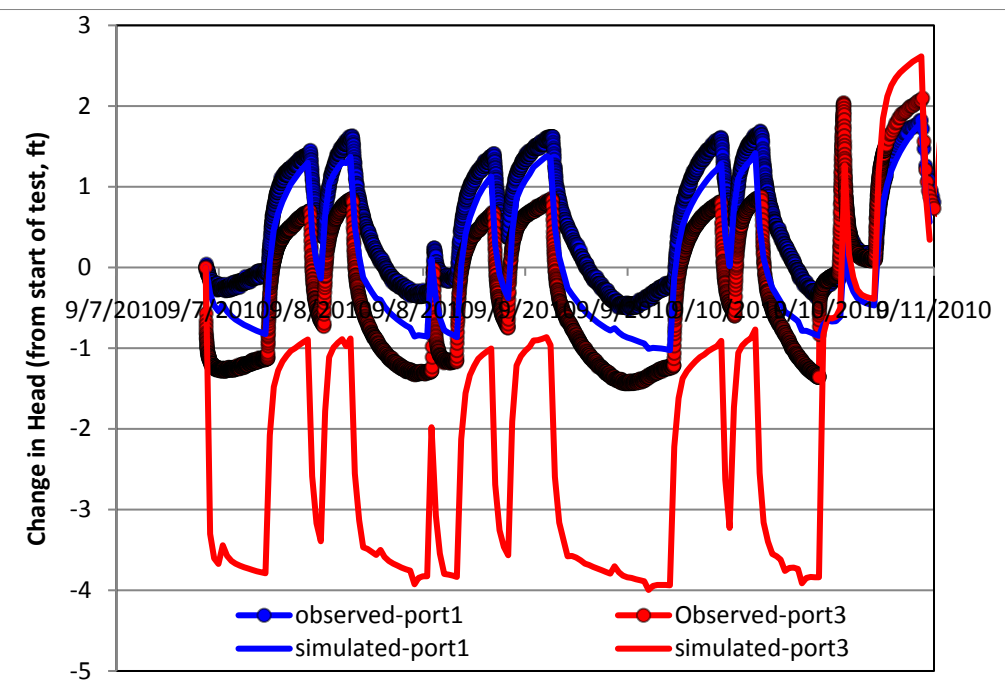
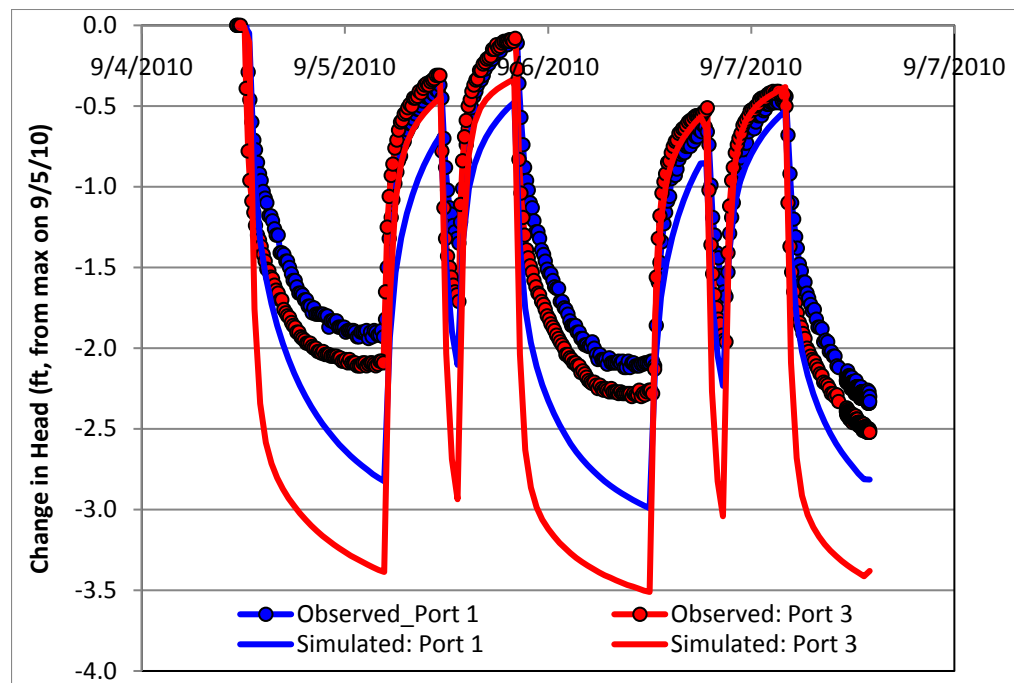
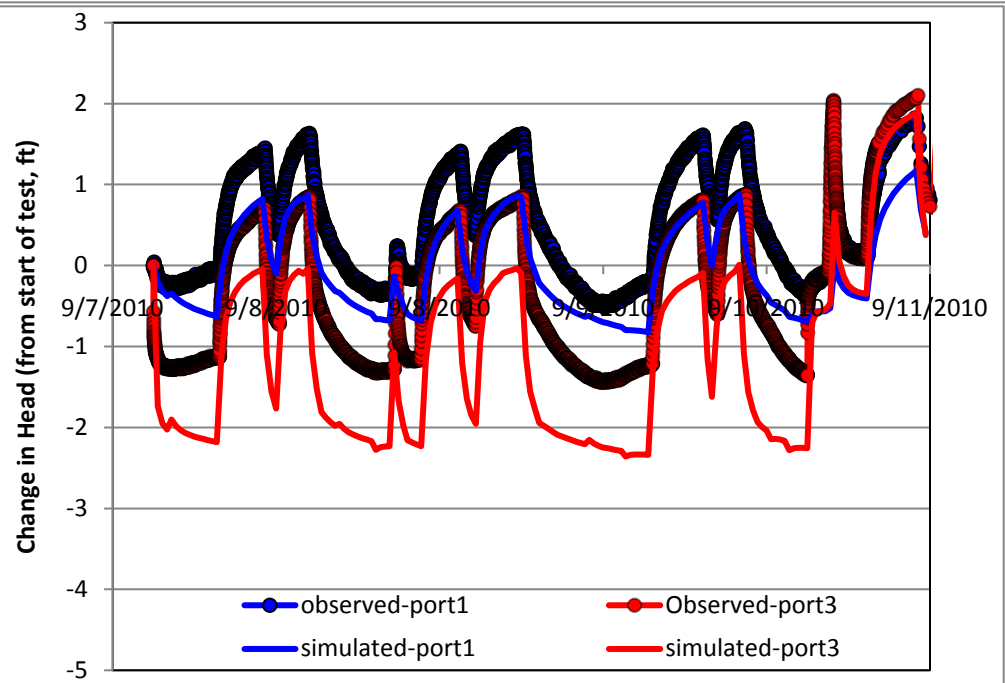
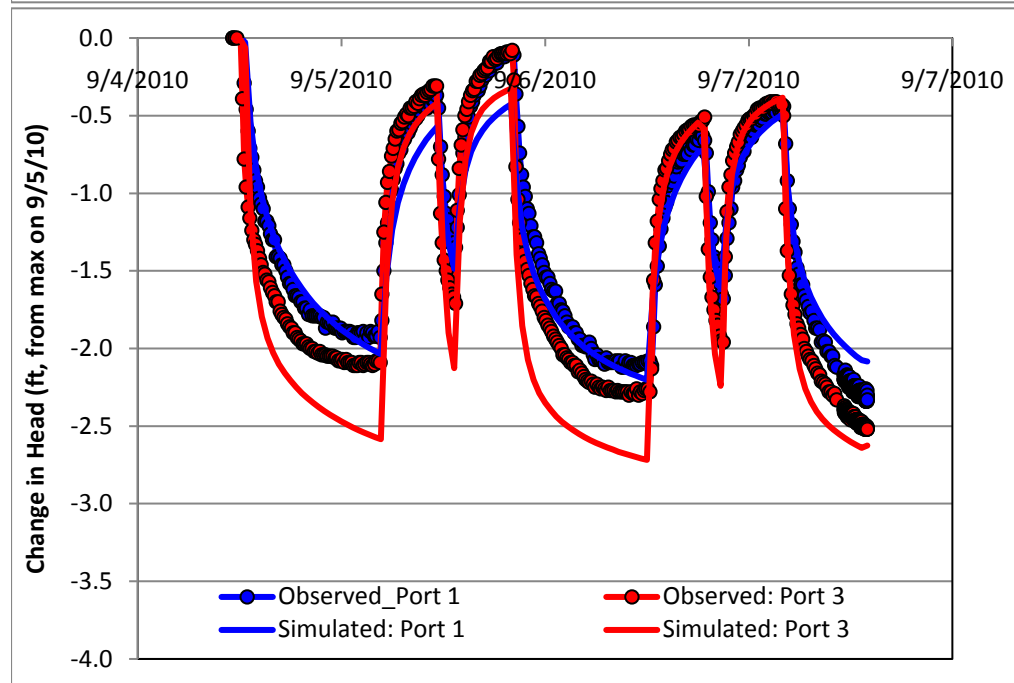


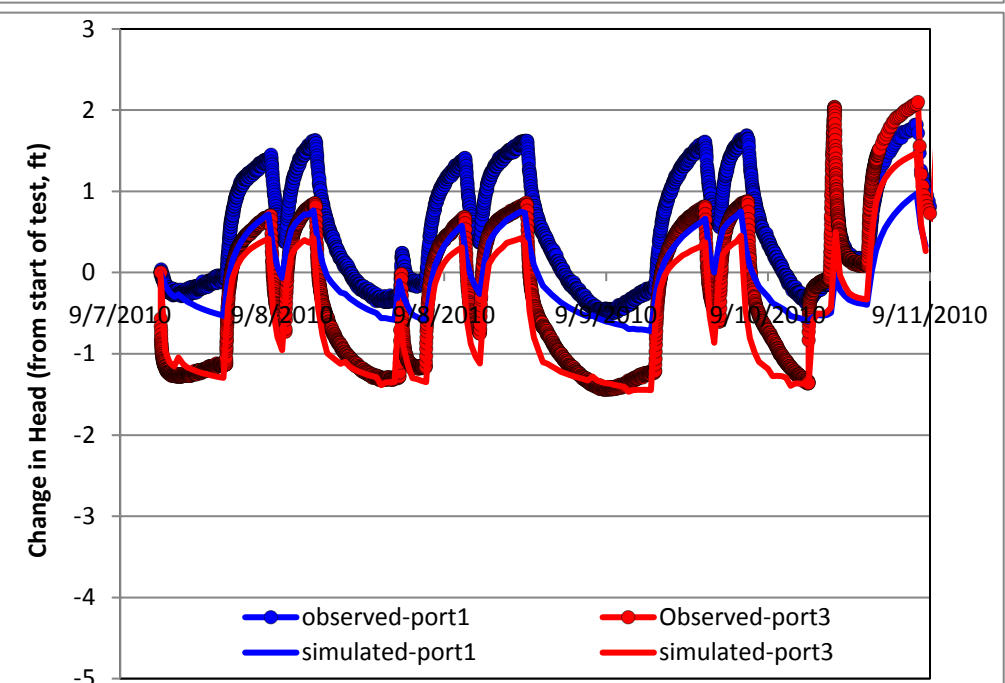
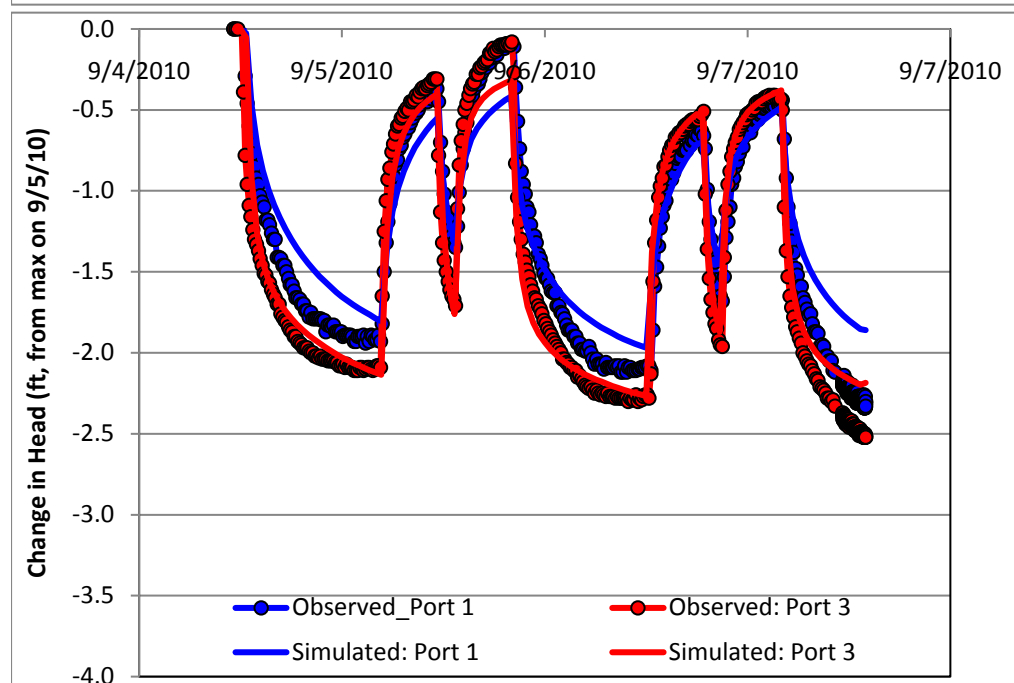
Figure 3
Old Roosevelt Field Groundwater Model
Northeast-Southwest Cross Section



Original Properties from calibrated model
 UM = 35/0.60 fpd
 MM = 40/0.7 fpd
 Sy = 0.25, Ss = 0.1E-5

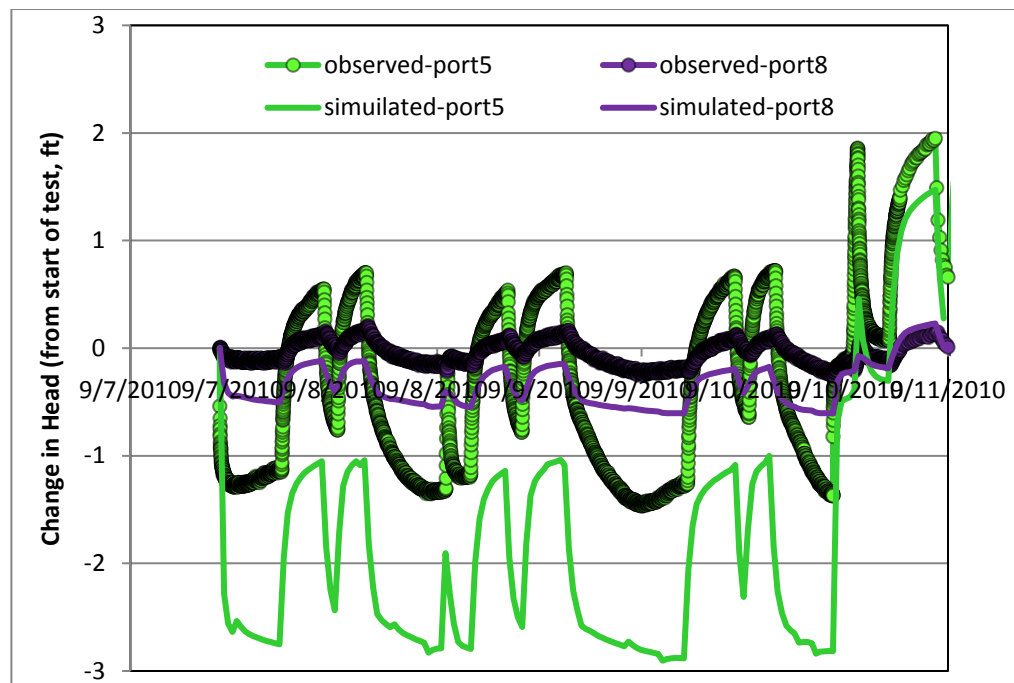
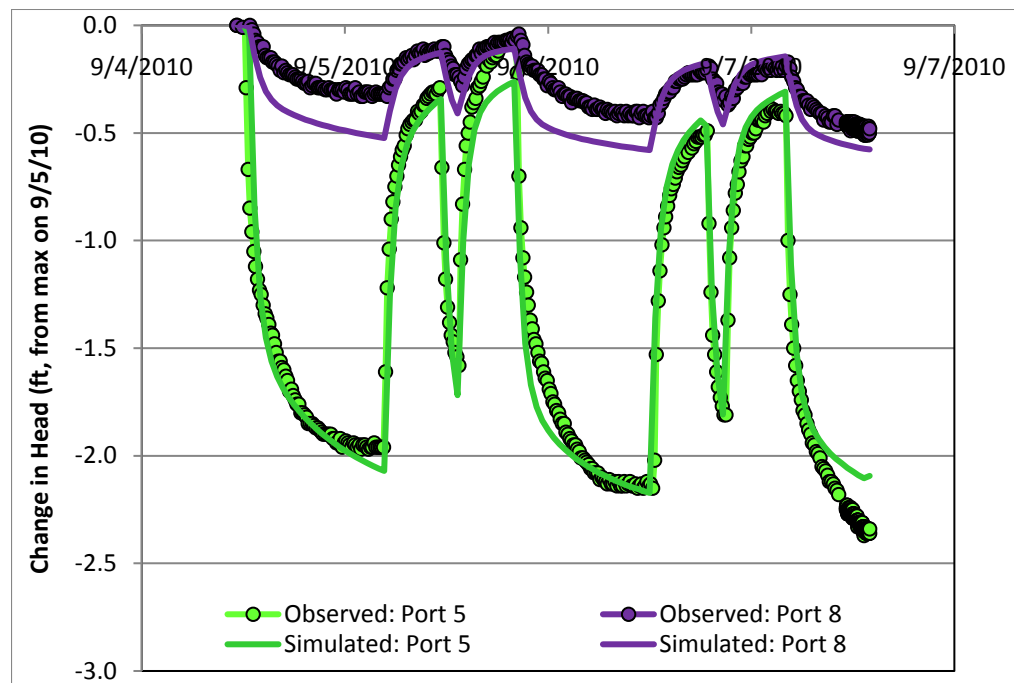


Coarse Zone added within MM (K=80/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

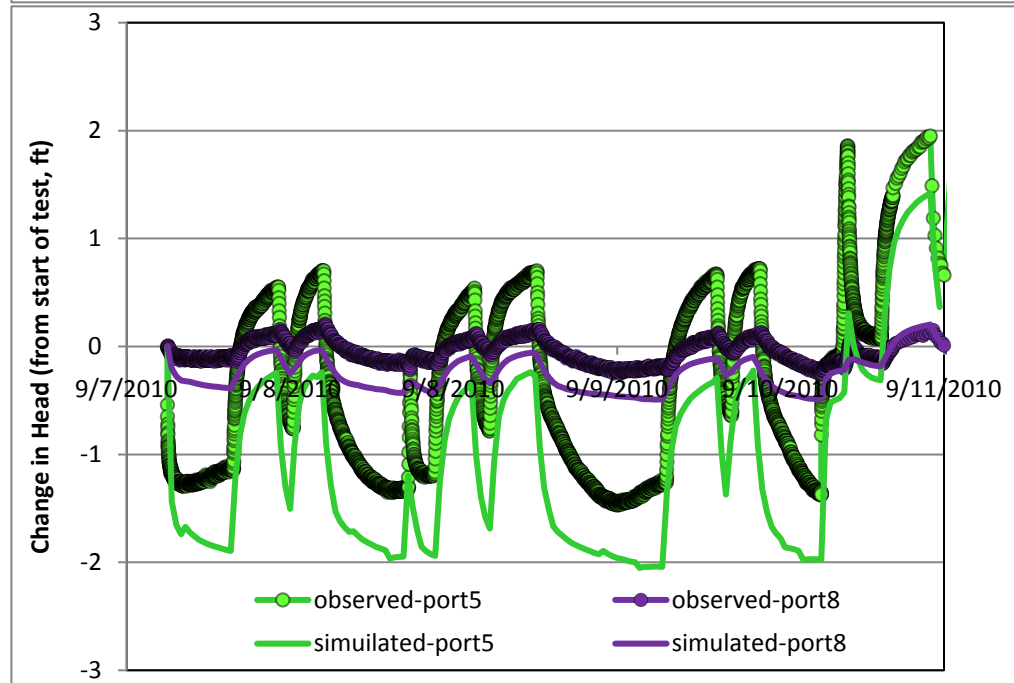
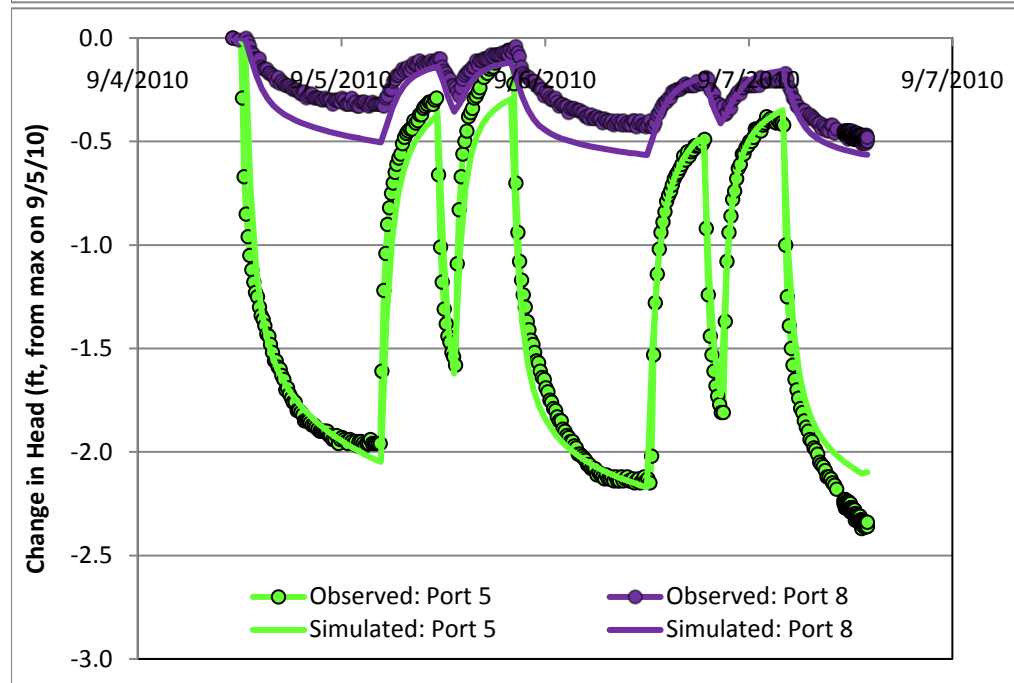


Coarse Zone added within MM (K=180/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

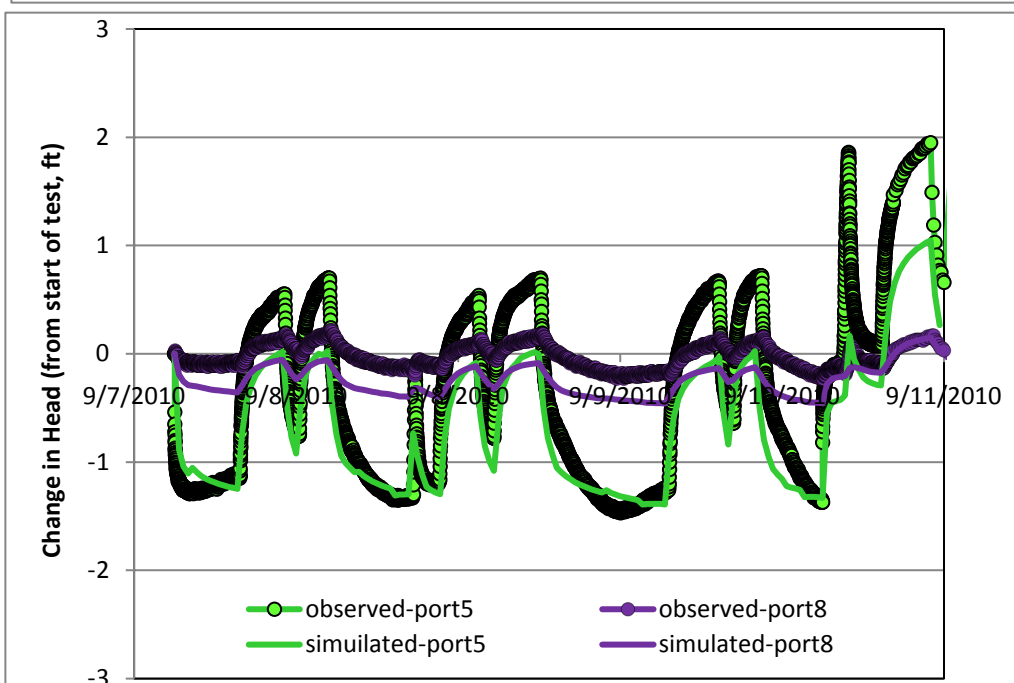
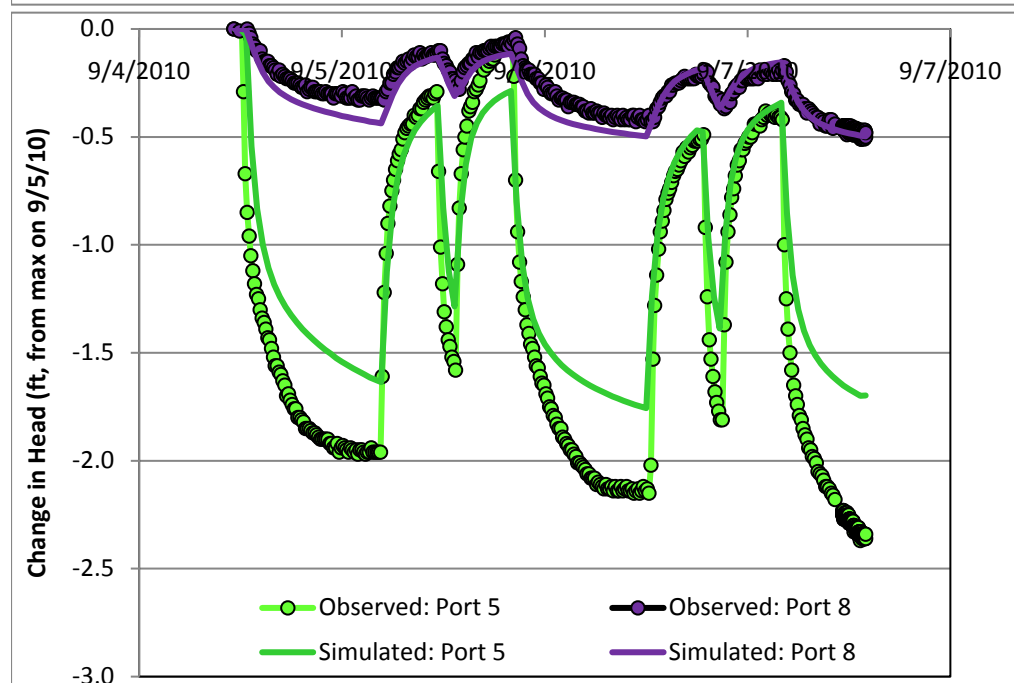
Figure 4a Simulated vs. observed head in SVP-10.
 Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
 $UM = 35/0.60 \text{ fpd}$
 $MM = 40/0.7 \text{ fpd}$
 $Sy = 0.25, Ss = 0.1E-5$

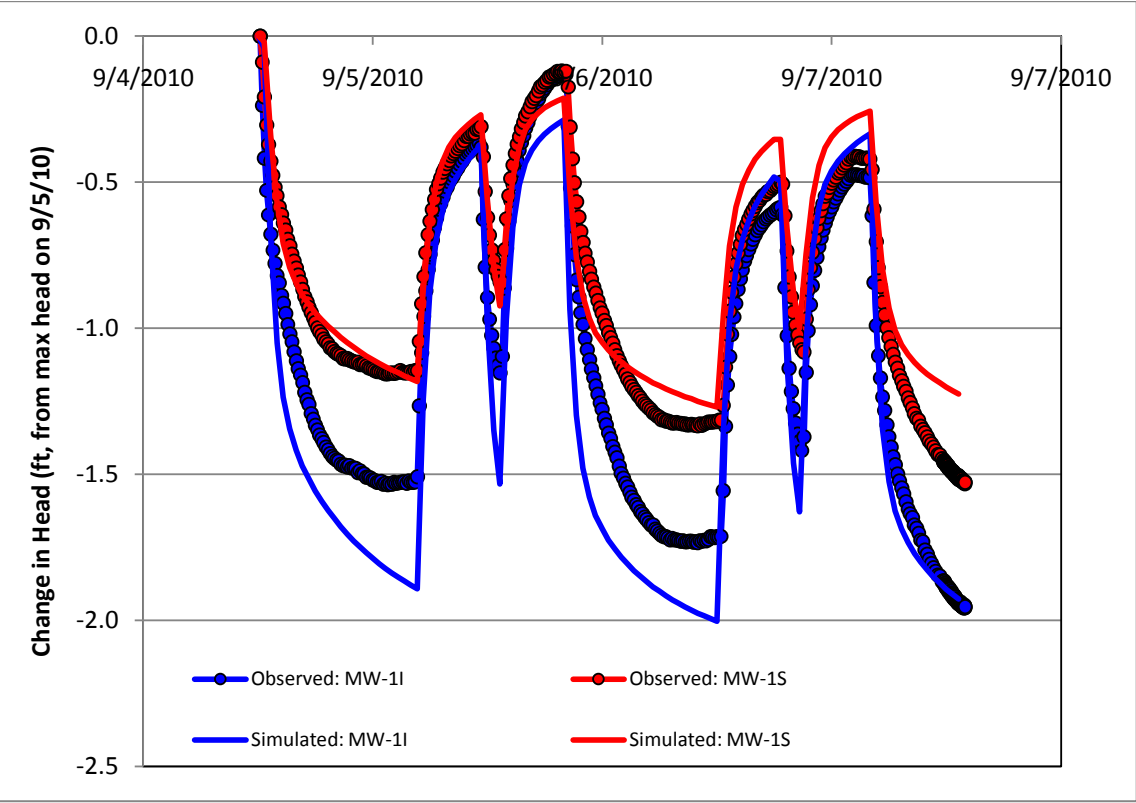


Coarse Zone added within MM ($K=80/2 \text{ fpd}$)
 modified storage properties slightly
 $Sy = 0.15$ for Magothy, $Ss = 0.2 E -5$
 $UM = Kh = 60 \text{ ft/d}$

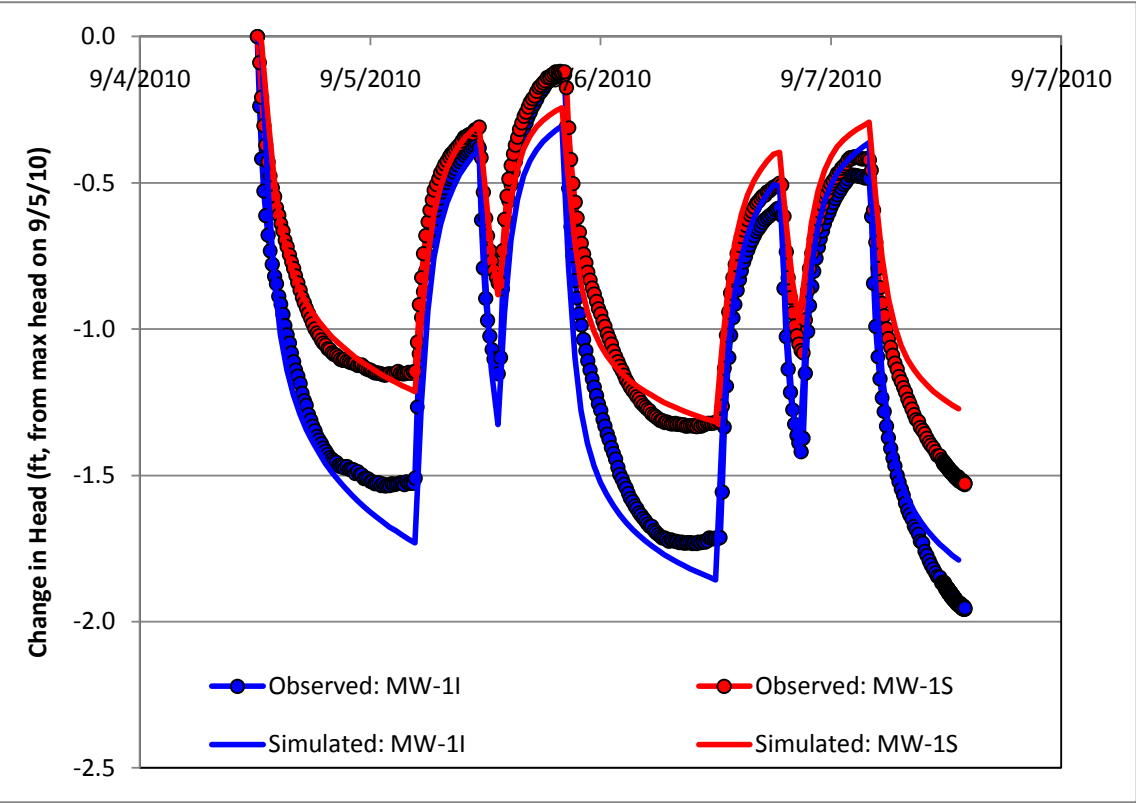


Coarse Zone added within MM ($K=180/2 \text{ fpd}$)
 modified storage properties slightly
 $Sy = 0.15$ for Magothy, $Ss = 0.2 E -5$
 $UM = Kh = 60 \text{ ft/d}$

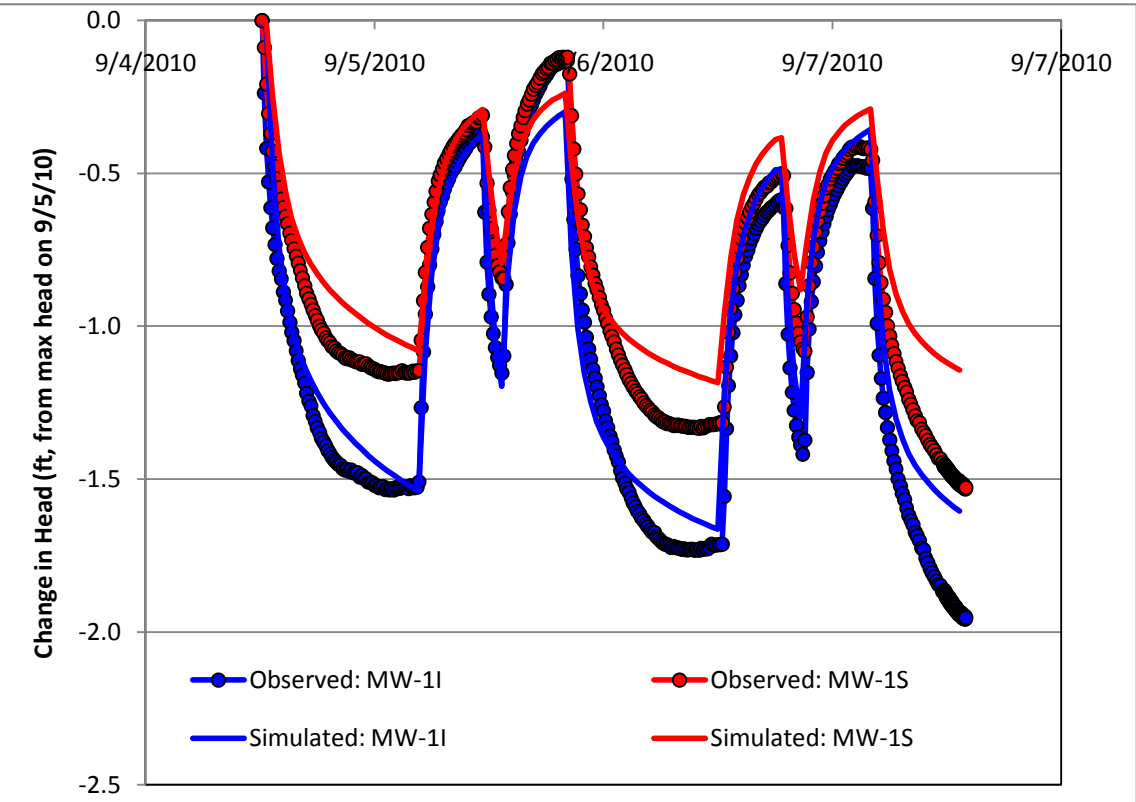
Figure 4b Simulated vs. observed head in SVP-10.
 Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
UM = 35/0.60 fpd
MM = 40/0.7 fpd
Sy = 0.25, Ss = 0.1E-5

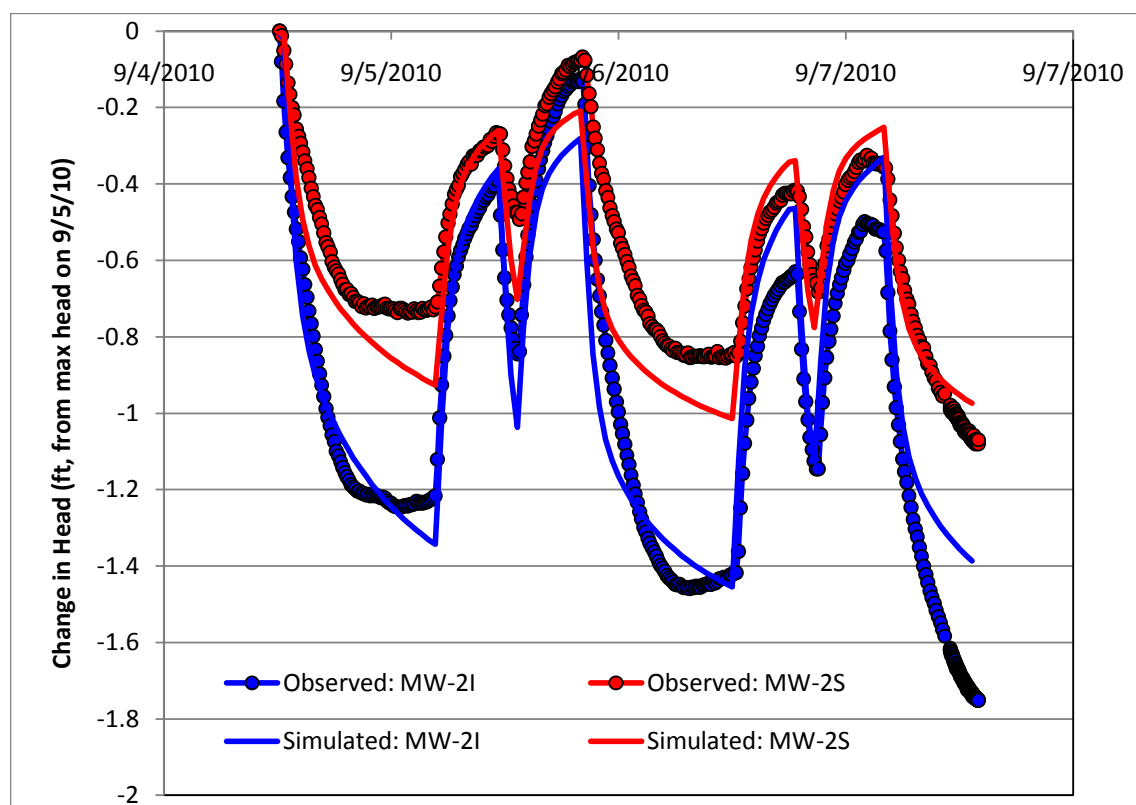


Coarse Zone added within MM (K=80/2 fpd)
modified storage properties slightly
Sy = 0.15 for Magothy, Ss = 0.2 E -5
UM = Kh = 60 ft/d

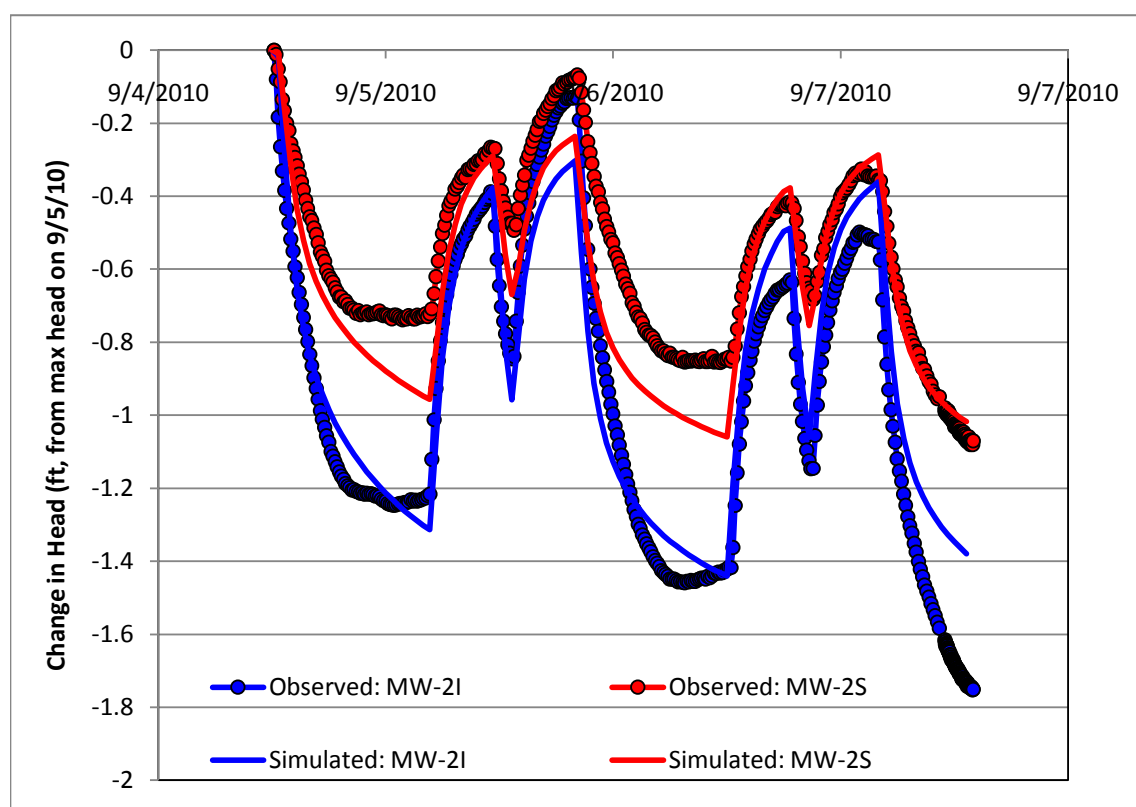


Coarse Zone added within MM (K=180/2 fpd)
modified storage properties slightly
Sy = 0.15 for Magothy, Ss = 0.2 E -5
UM = Kh = 60 ft/d

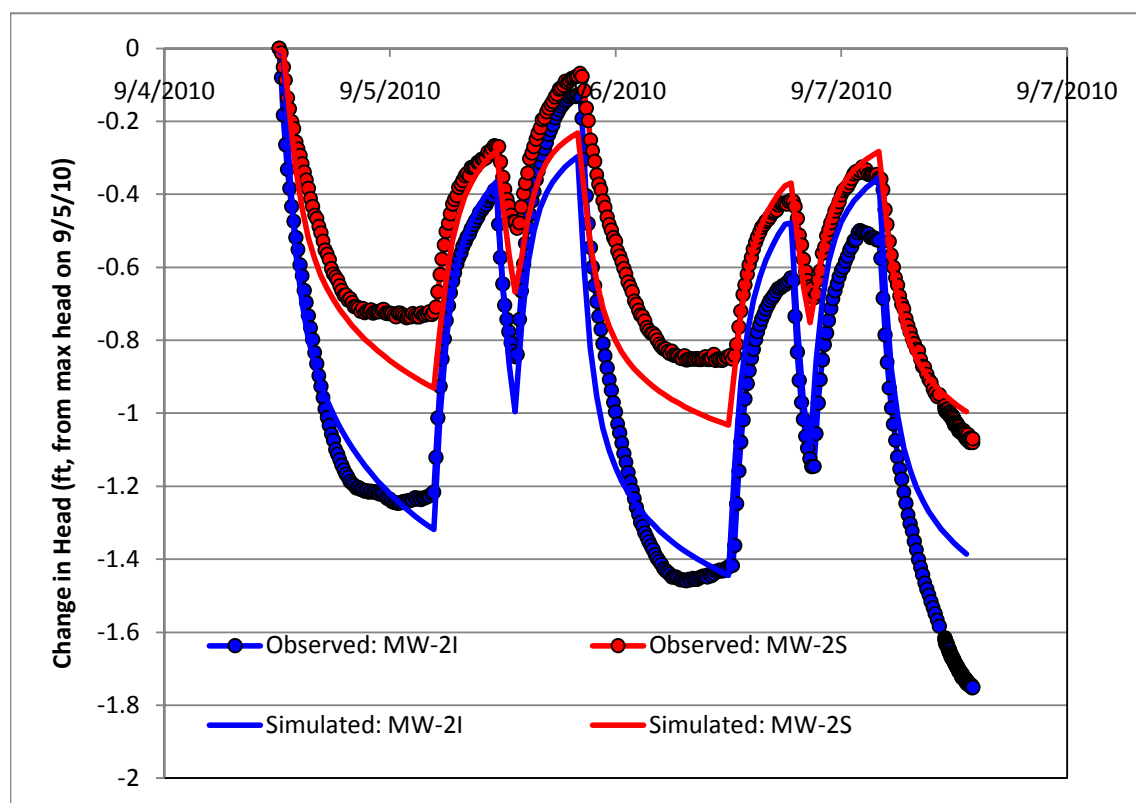
Figure 5 Simulated vs. observed head in MW-01.
Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
 UM = 35/0.60 fpd
 MM = 40/0.7 fpd
 Sy = 0.25, Ss = 0.1E-5

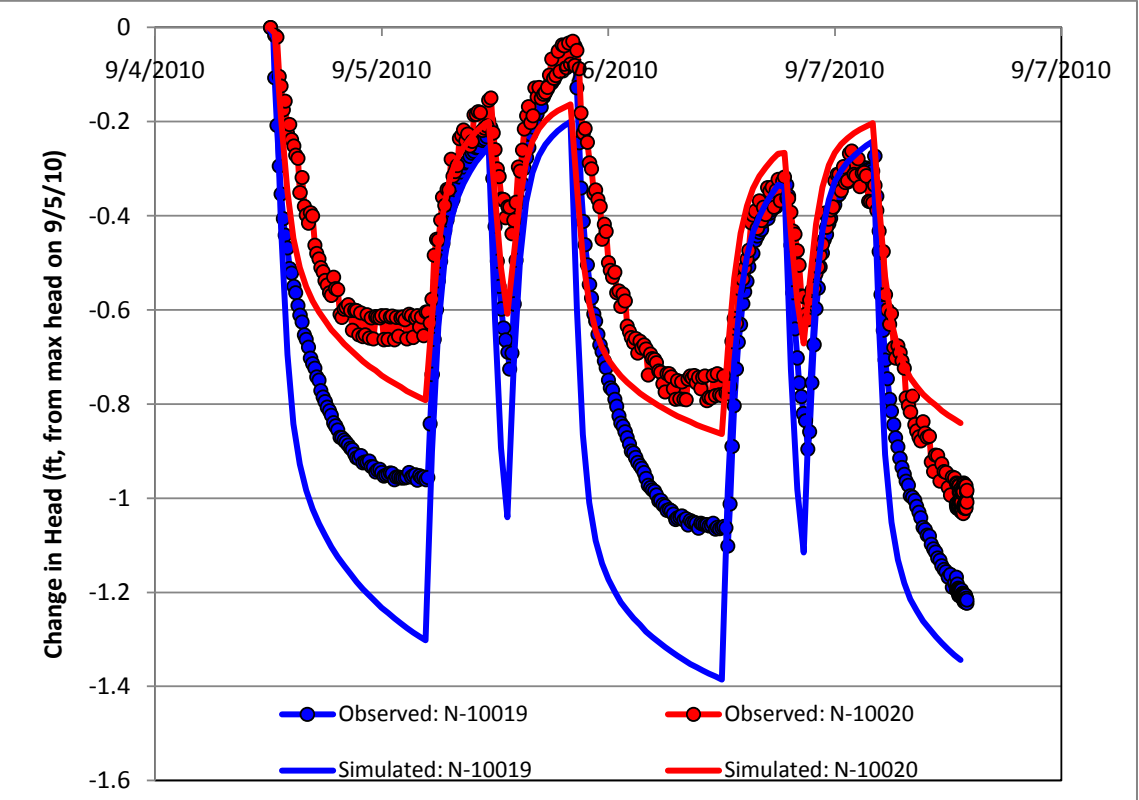


Coarse Zone added within MM (K=80/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

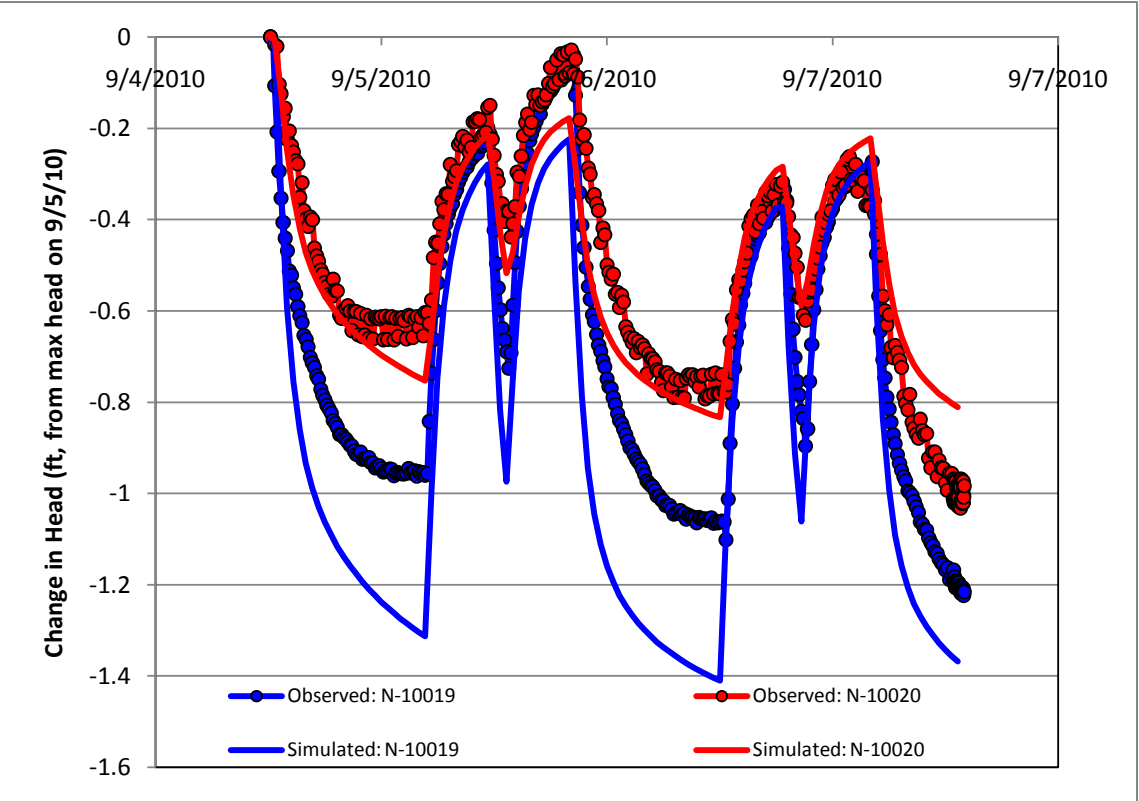


Coarse Zone added within MM (K=180/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

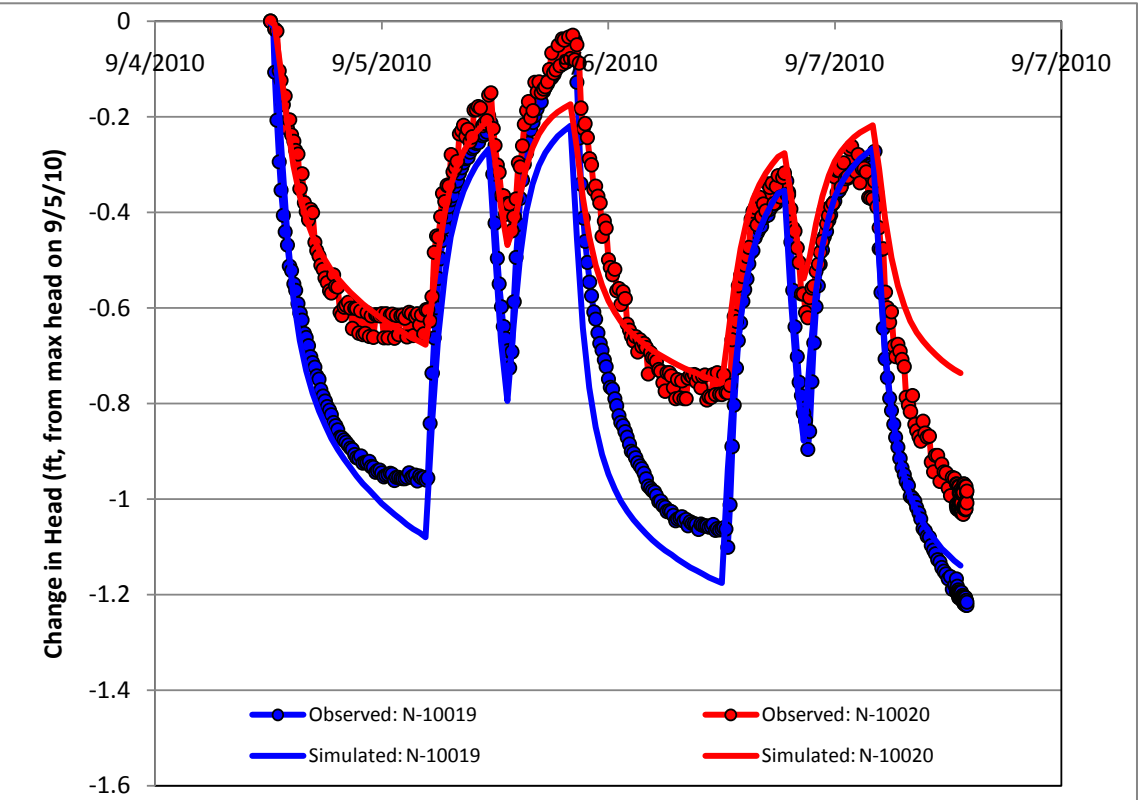
Figure 6 Simulated vs. observed head in MW-02.
 Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
 UM = 35/0.60 fpd
 MM = 40/0.7 fpd
 Sy = 0.25, Ss = 0.1E-5

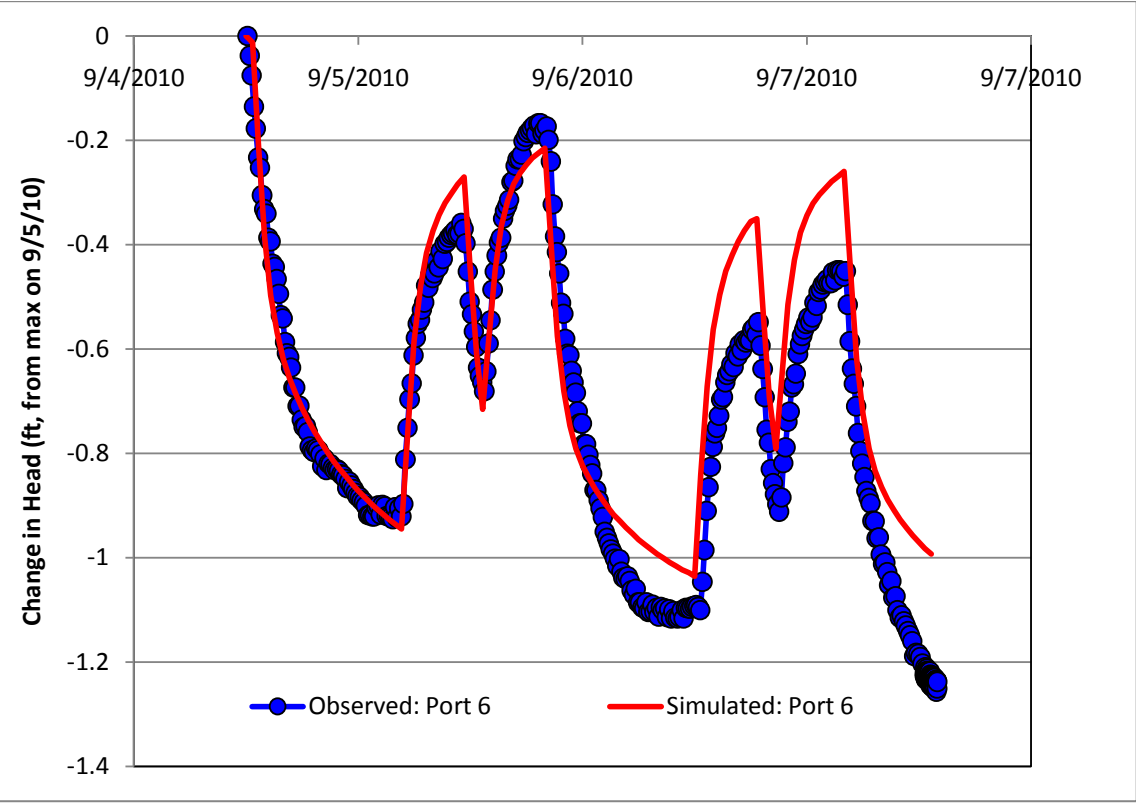


Coarse Zone added within MM (K=80/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

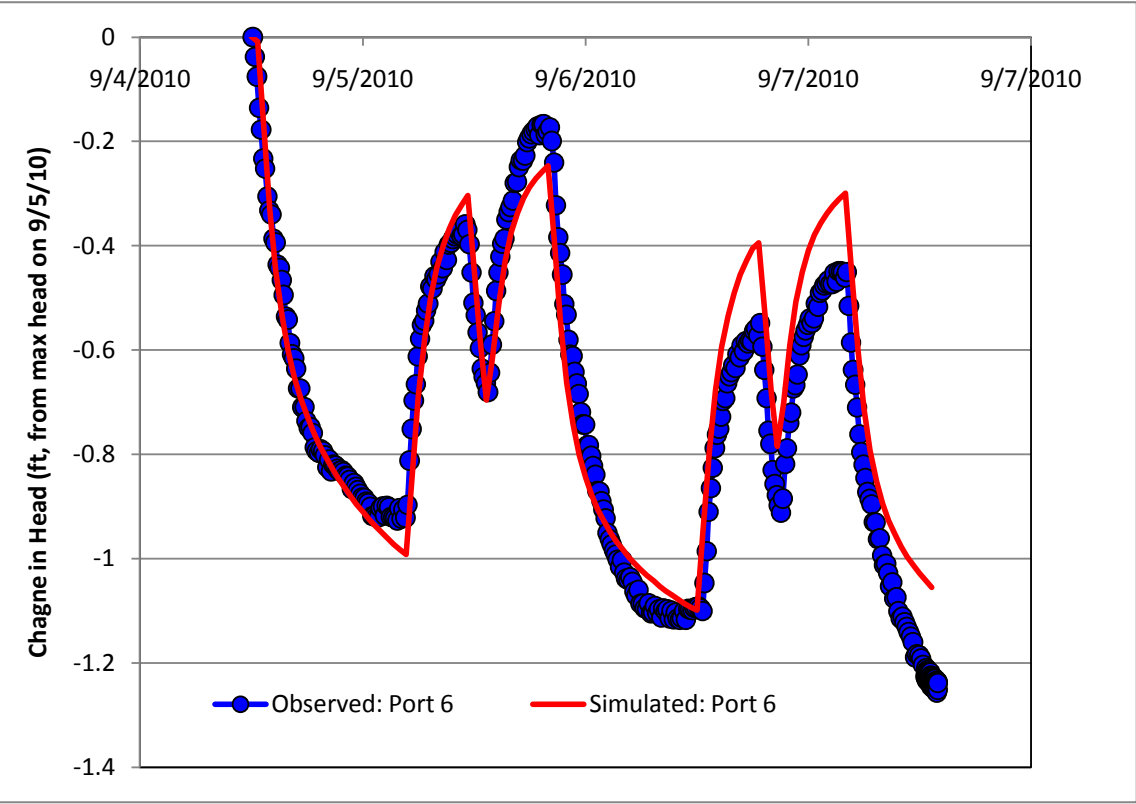


Coarse Zone added within MM (K=180/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

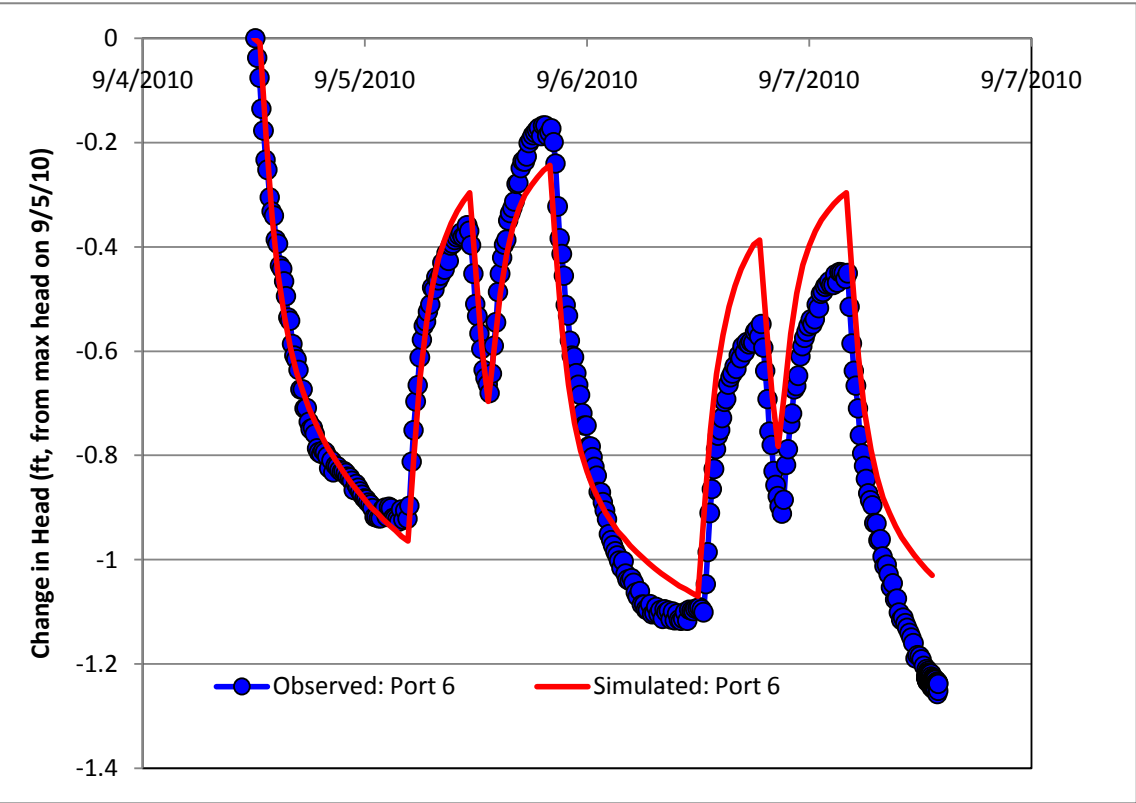
Figure 7 Simulated vs. observed head in NCDPW monitoring wells. Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
 UM = 35/0.60 fpd
 MM = 40/0.7 fpd
 Sy = 0.25, Ss = 0.1E-5

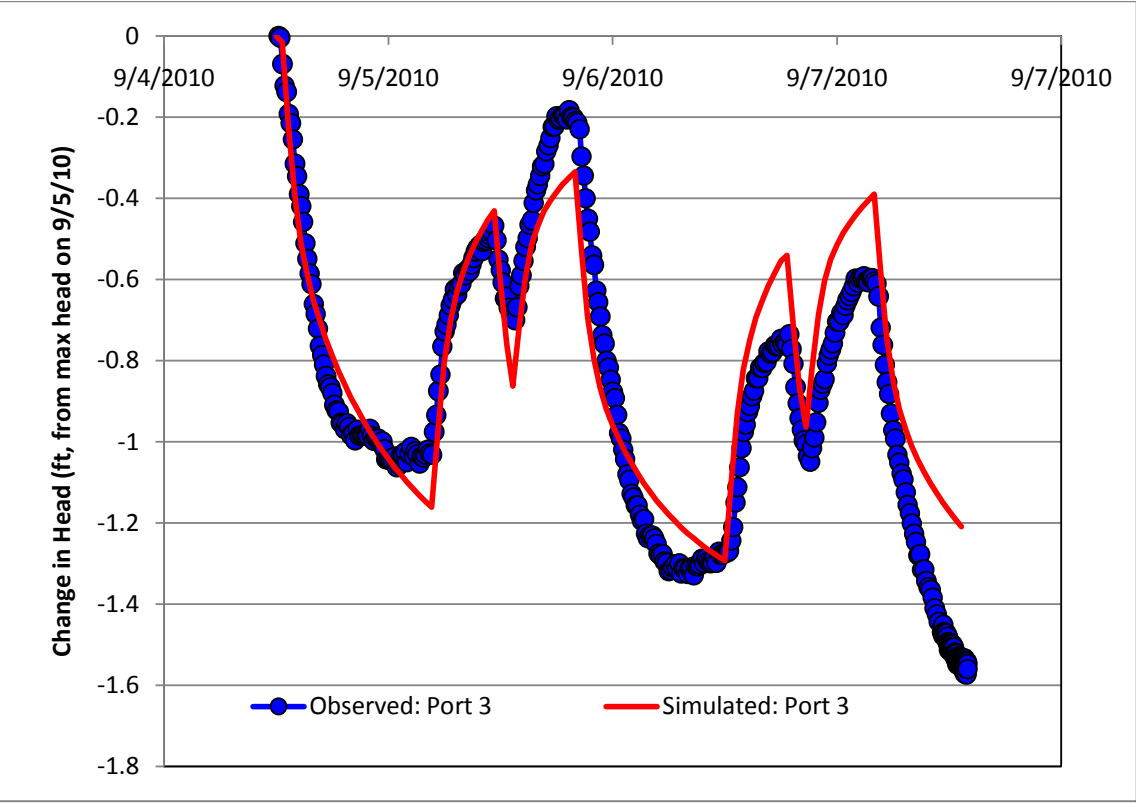


Coarse Zone added within MM (K=80/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

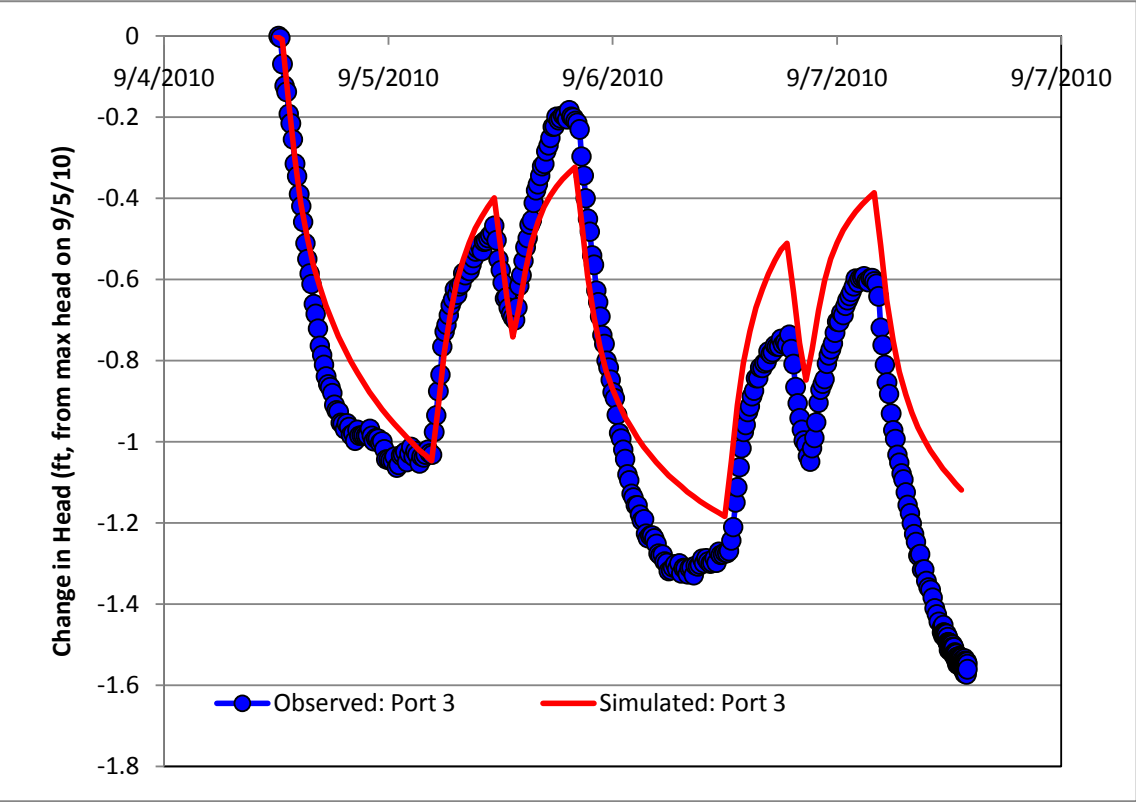


Coarse Zone added within MM (K=180/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

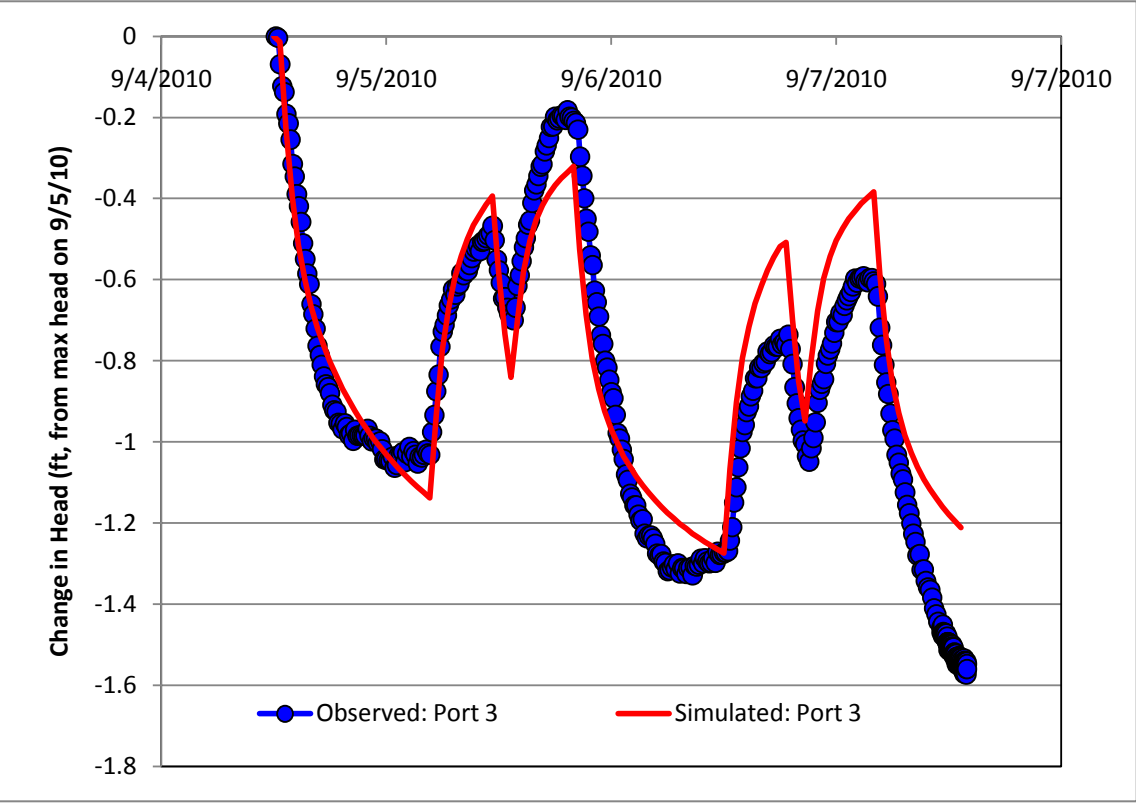
Figure 8 Simulated vs. observed head in SVP-04.
 Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
 UM = 35/0.60 fpd
 MM = 40/0.7 fpd
 Sy = 0.25, Ss = 0.1E-5

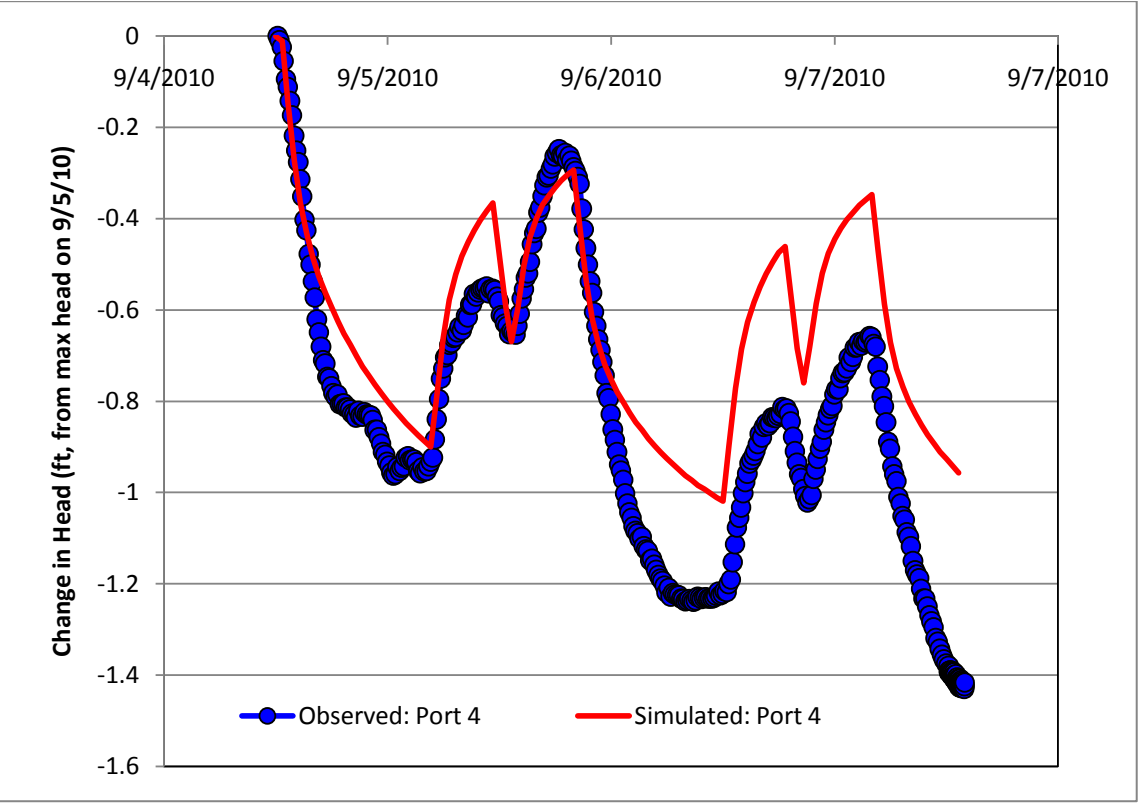


Coarse Zone added within MM (K=80/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

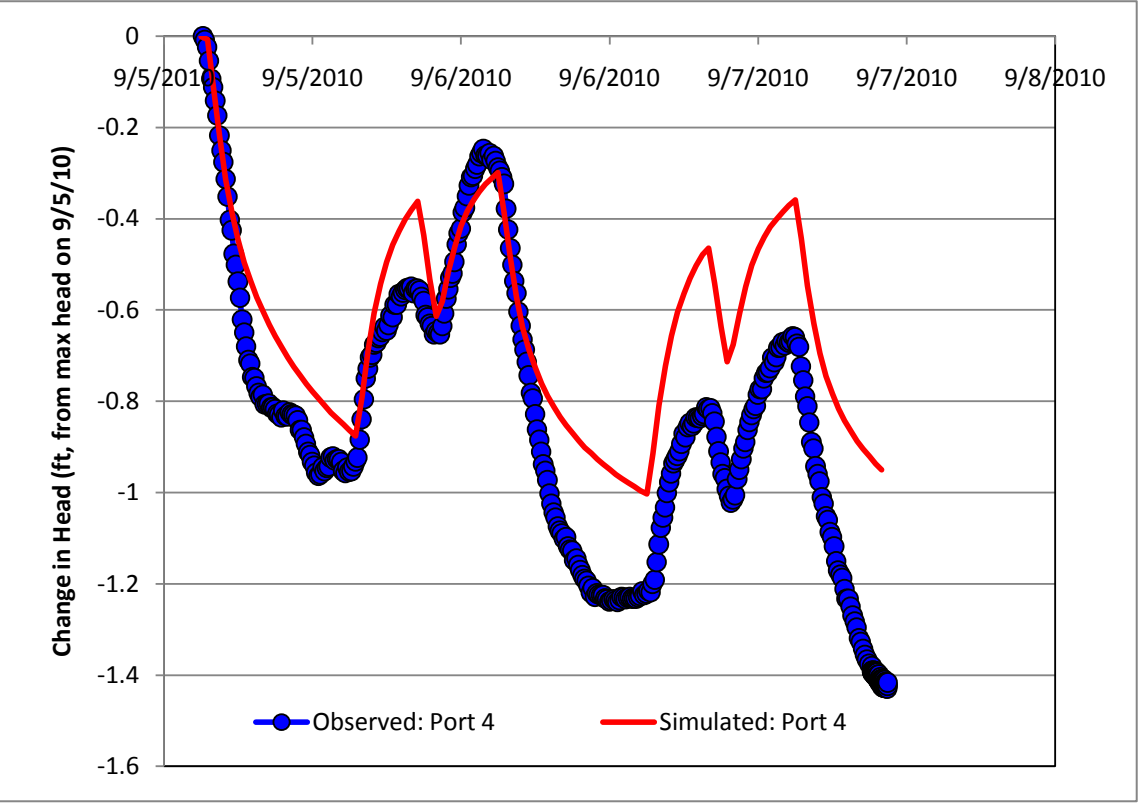


Coarse Zone added within MM (K=180/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

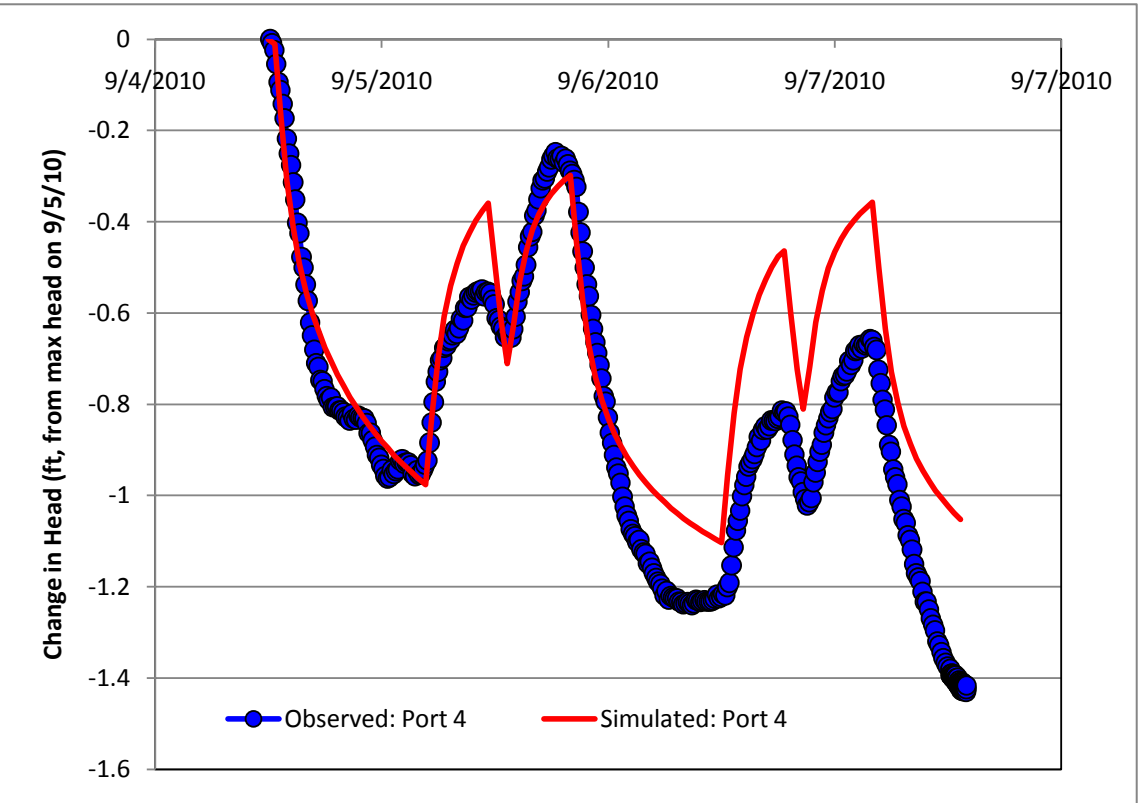
Figure 9 Simulated vs. observed head in SVP-03.
 Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
UM = 35/0.60 fpd
MM = 40/0.7 fpd
Sy = 0.25, Ss = 0.1E-5

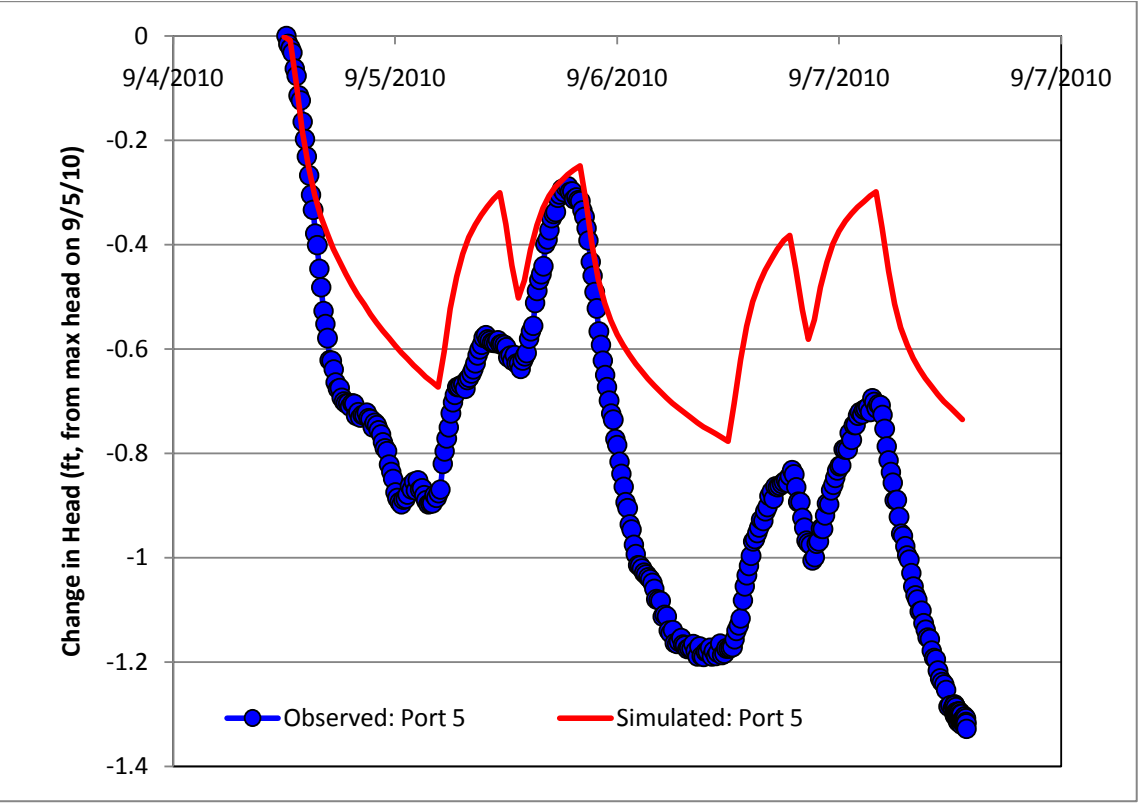


Coarse Zone added within MM (K=80/2 fpd)
modified storage properties slightly
Sy = 0.15 for Magothy, Ss = 0.2 E -5
UM = Kh = 60 ft/d

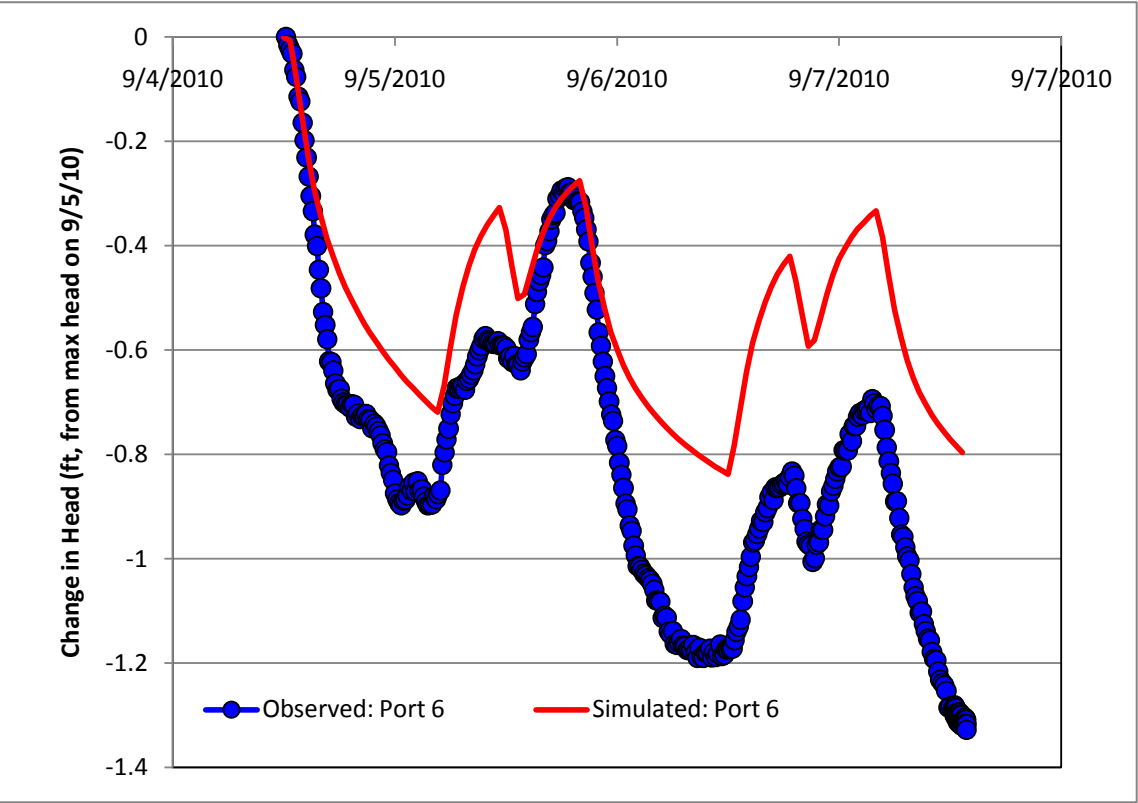


Coarse Zone added within MM (K=180/2 fpd)
modified storage properties slightly
Sy = 0.15 for Magothy, Ss = 0.2 E -5
UM = Kh = 60 ft/d

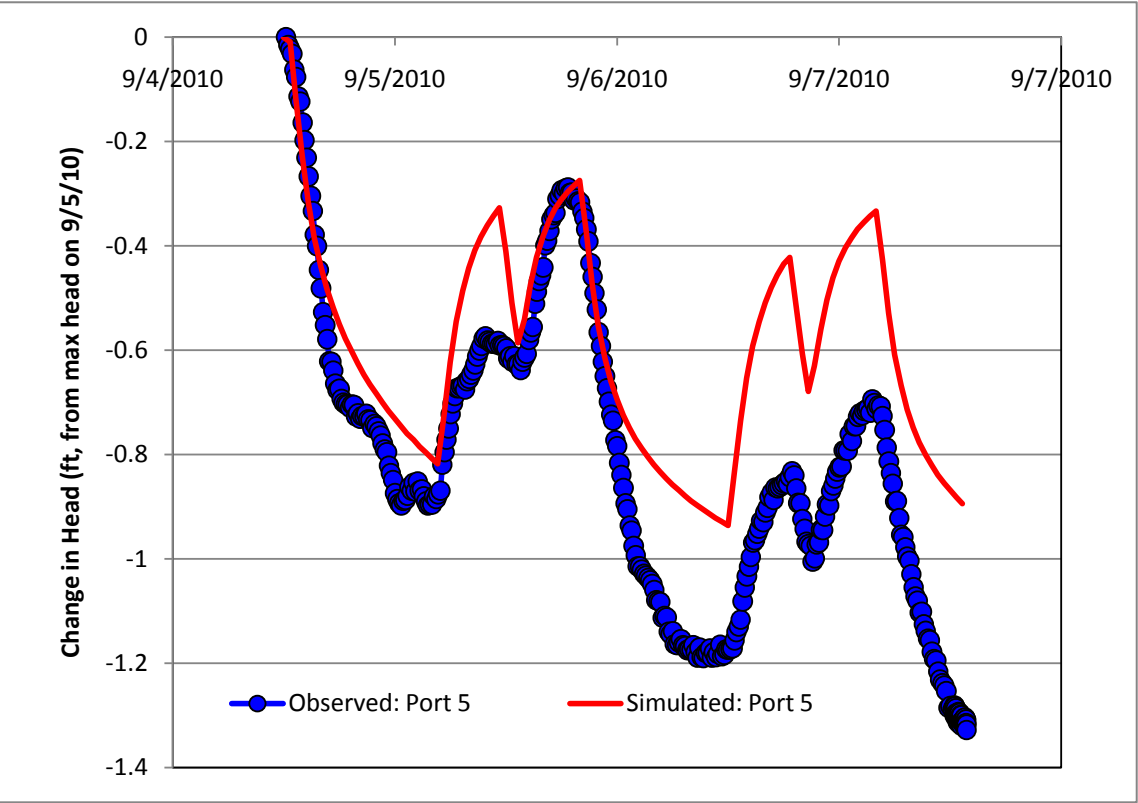
Figure 10 Simulated vs. observed head in SVP-02. Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
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MM = 40/0.7 fpd
Sy = 0.25, Ss = 0.1E-5

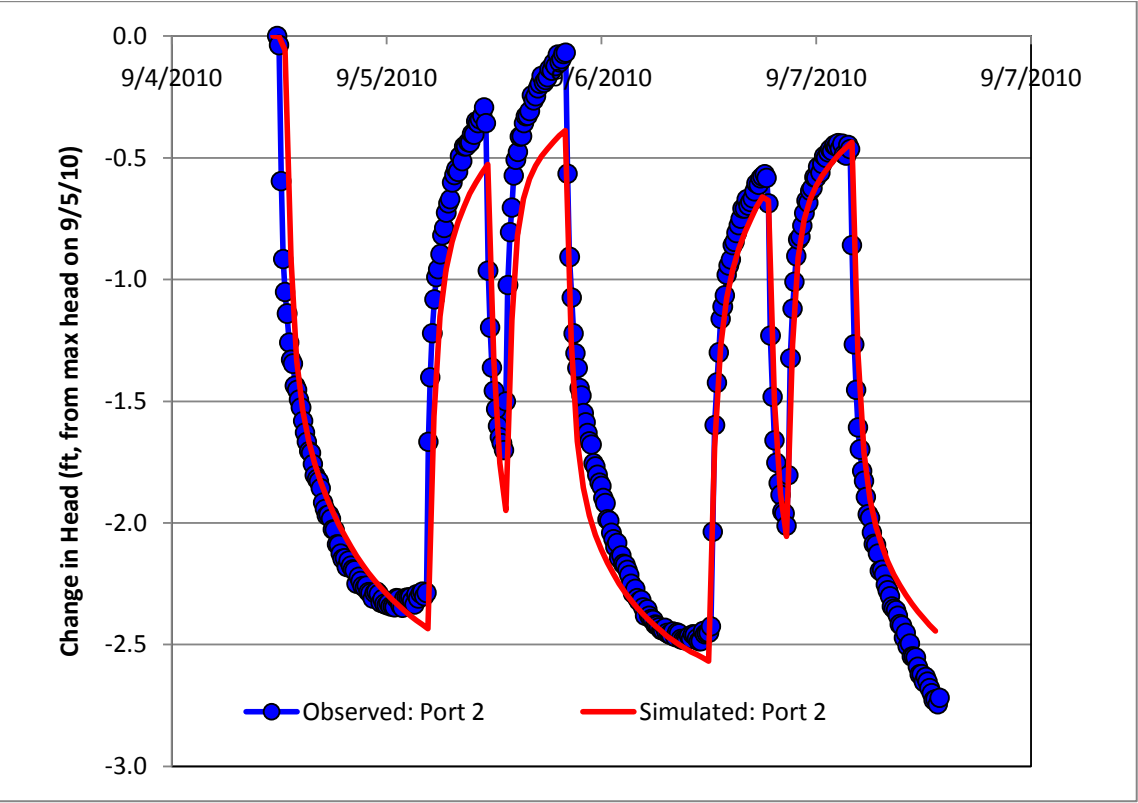


Coarse Zone added within MM (K=80/2 fpd)
modified storage properties slightly
Sy = 0.15 for Magothy, Ss = 0.2 E -5
UM = Kh = 60 ft/d

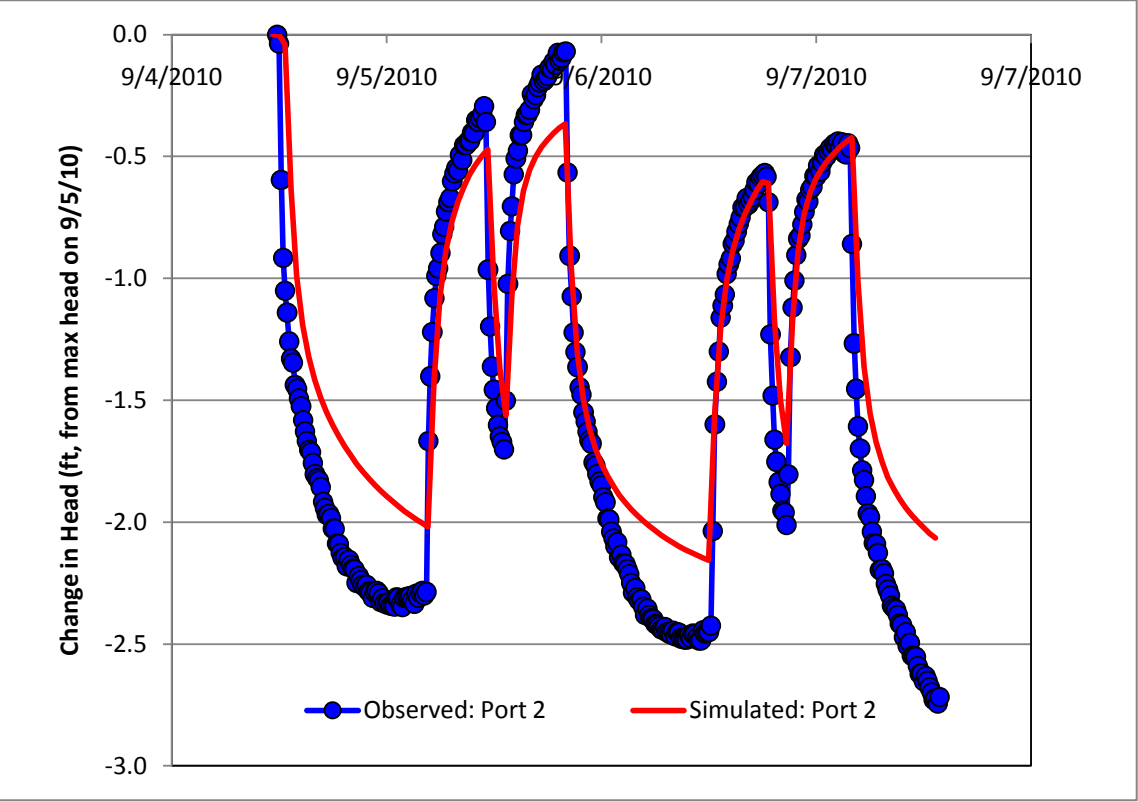


Coarse Zone added within MM (K=180/2 fpd)
modified storage properties slightly
Sy = 0.15 for Magothy, Ss = 0.2 E -5
UM = Kh = 60 ft/d

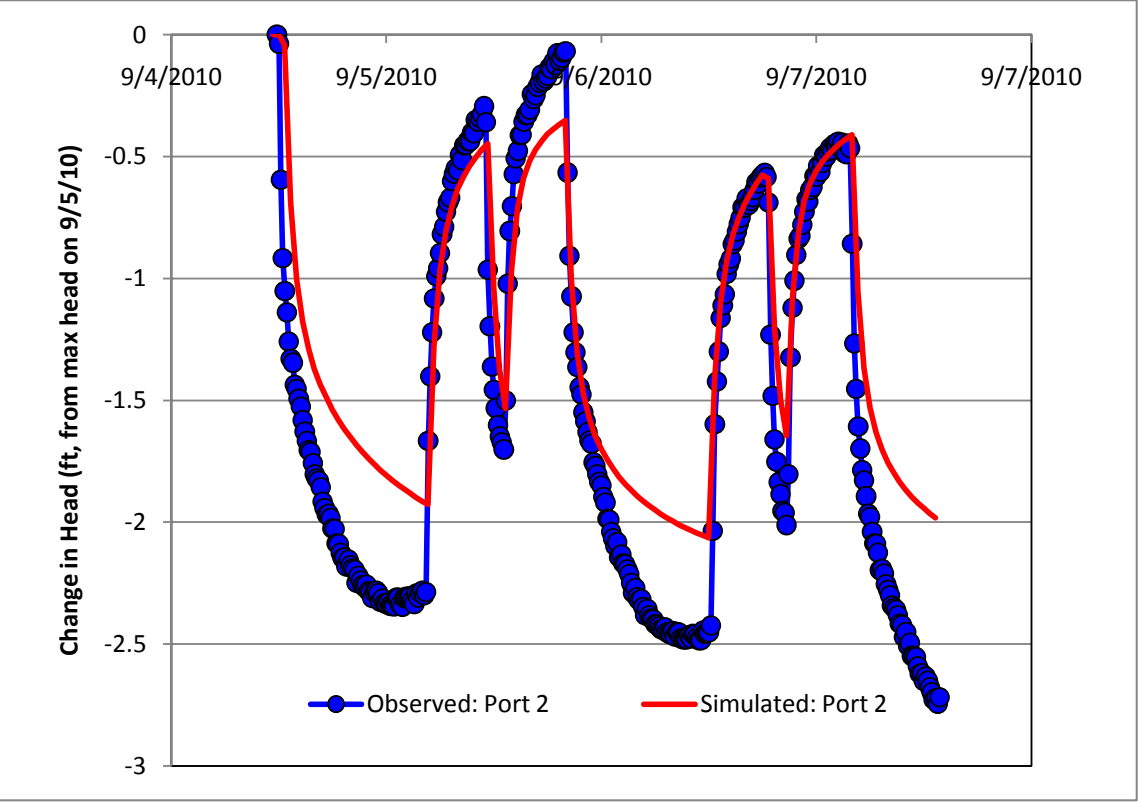
Figure 11 Simulated vs. observed head in SVP-09. Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).



Original Properties from calibrated model
 UM = 35/0.60 fpd
 MM = 40/0.7 fpd
 Sy = 0.25, Ss = 0.1E-5



Coarse Zone added within MM (K=80/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d



Coarse Zone added within MM (K=180/2 fpd)
 modified storage properties slightly
 Sy = 0.15 for Magothy, Ss = 0.2 E -5
 UM = Kh = 60 ft/d

Figure 12 Simulated vs. observed head in SVP-11.
 Graphs on the left hand side are pre-aquifer test and represent background (pumping influence of Garden City supply wells only). Graphs to the right are during the aquifer test (EW-01 pumping).

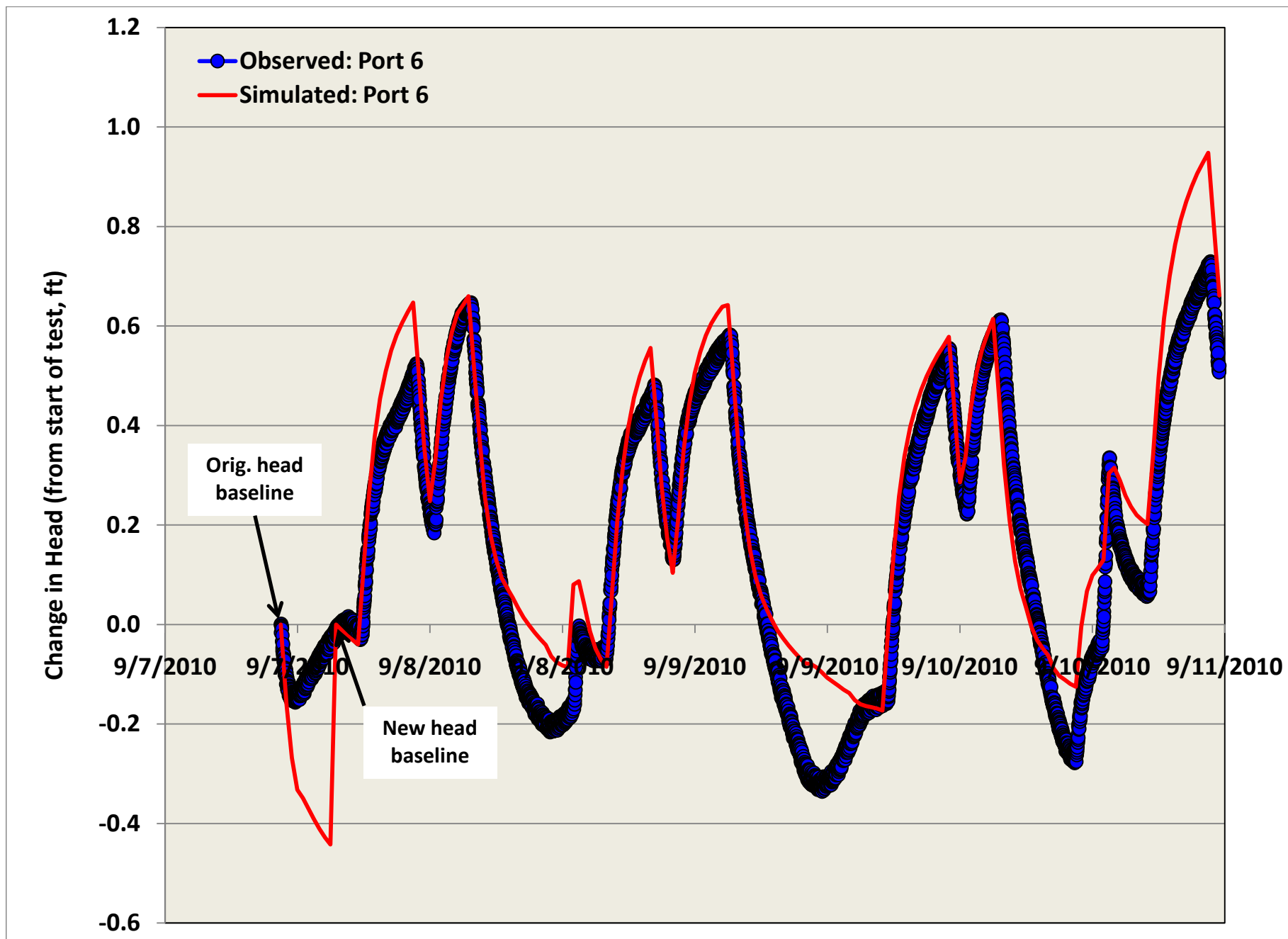
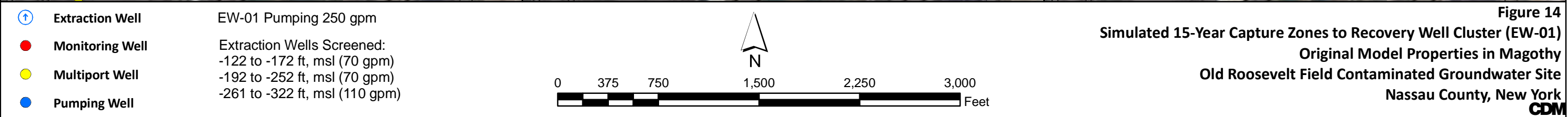
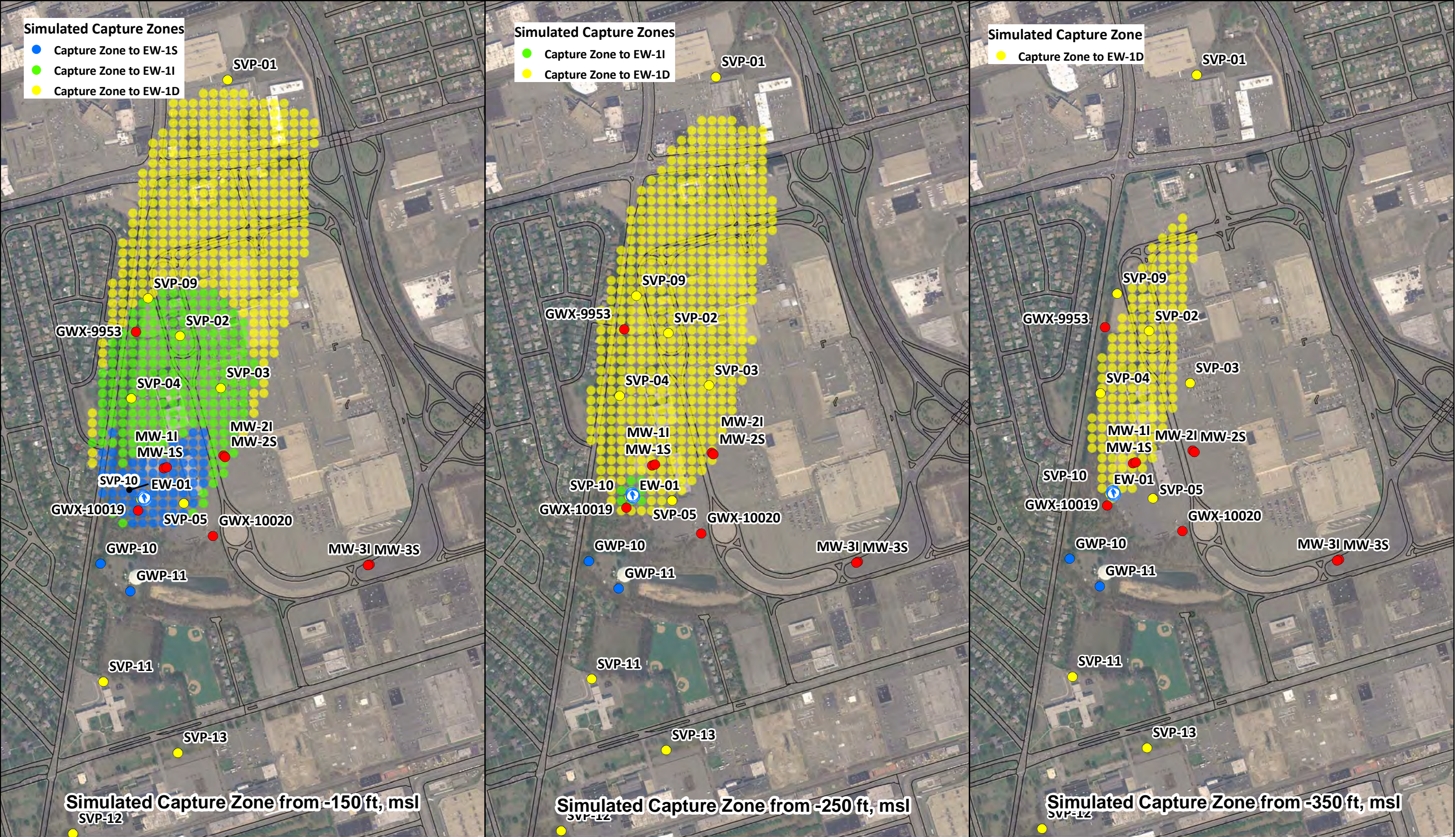
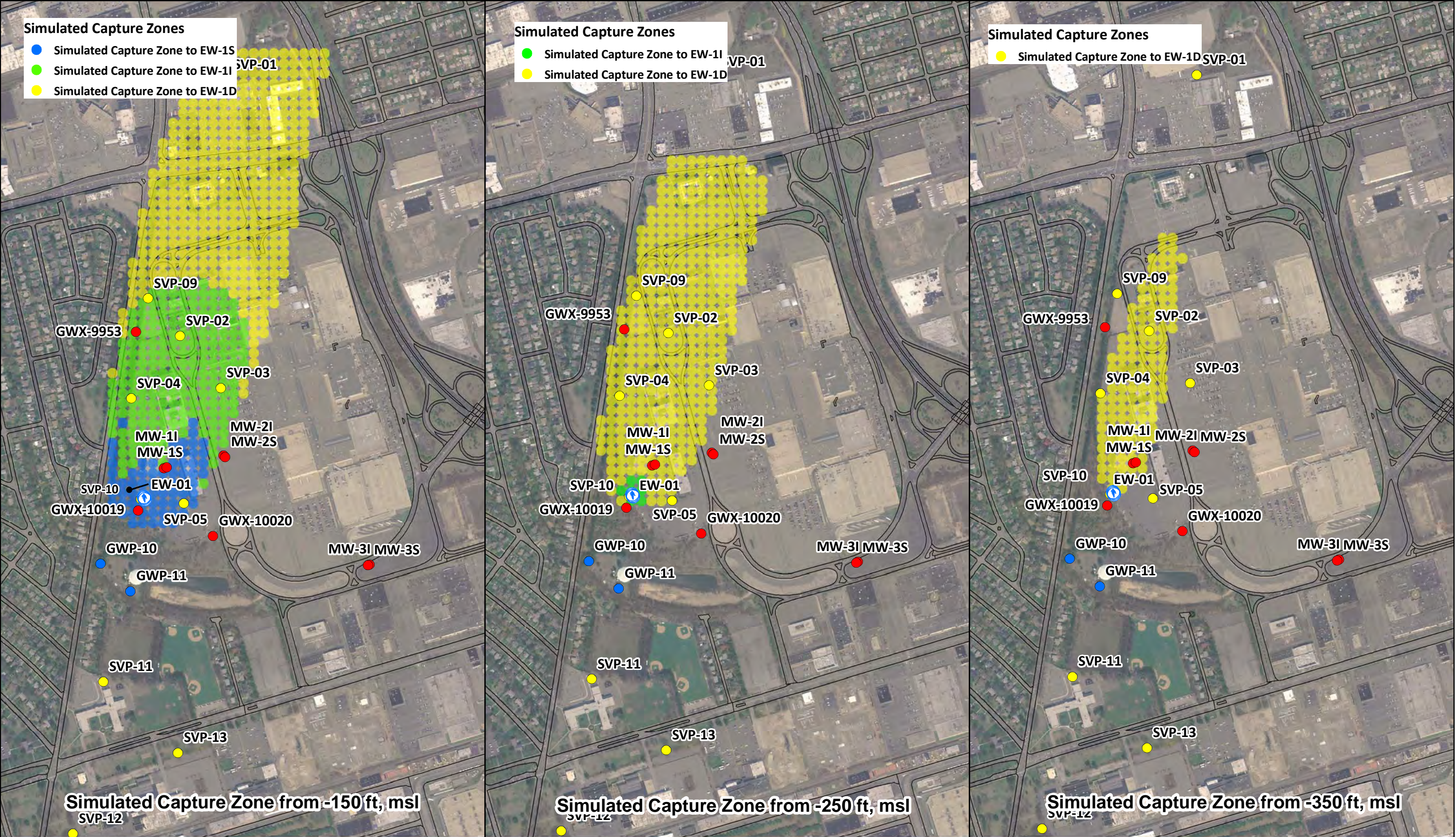


Figure 13
Simulated vs Observed Drawdown for SVP-04 (Port 6)
Simulated Drawdown Measured from 9/7/10 15:29.





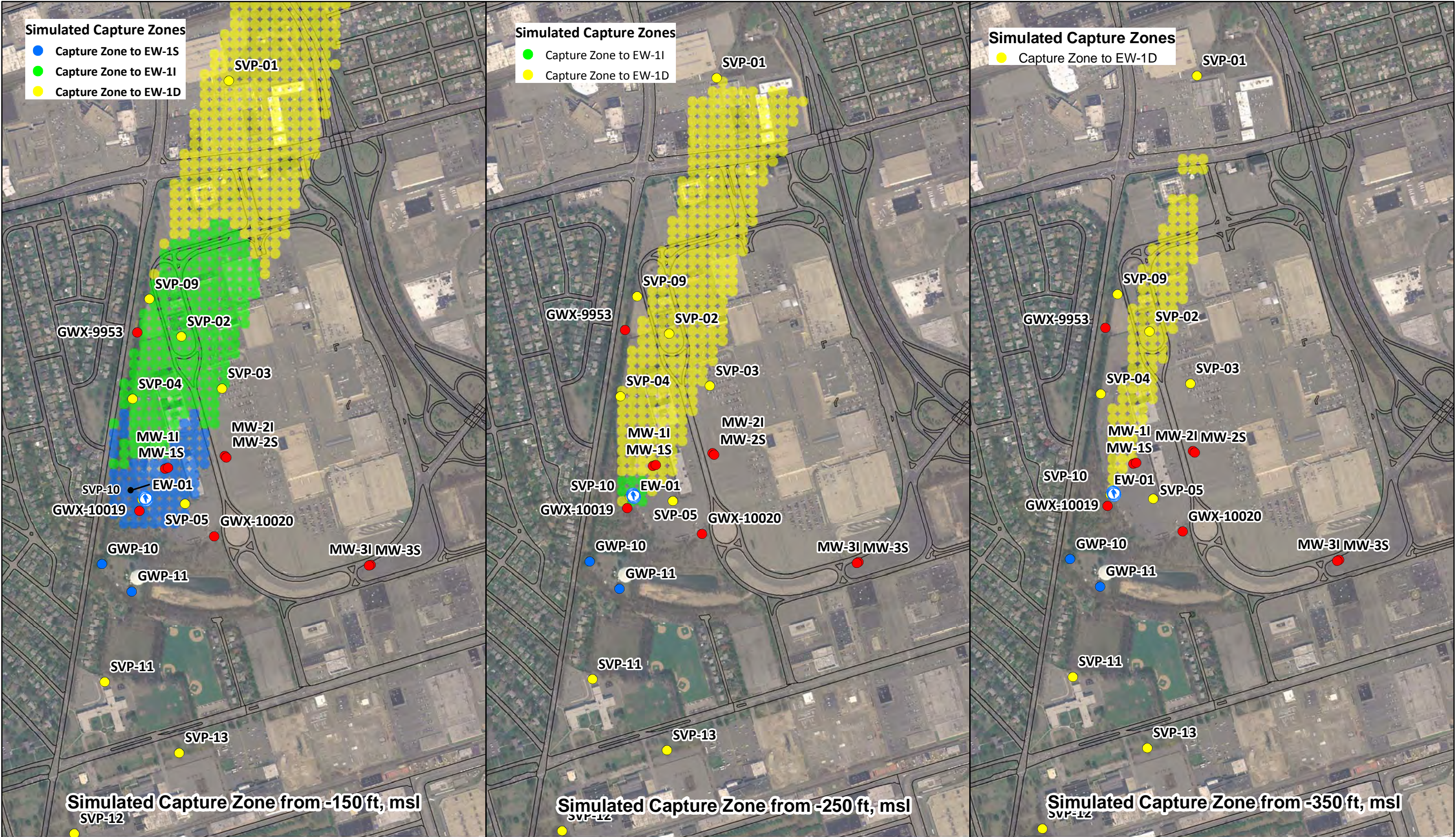


Figure 16
Simulated 15-Year Capture Zones to Recovery Well Cluster (EW-01)
Sandy Zone Incorporated (Kh = 180 ft/d)
Old Roosevelt Field Contaminated Groundwater Site
Nassau County, New York
CDM

Simulated Capture Zones
● Capture Zone to EW-1S
● Capture Zone to EW-1I
● Capture Zone to EW-1D

Simulated Capture Zones
● Capture Zone to EW-1I
● Capture Zone to EW-1D

Simulated Capture Zones
● Capture Zone to EW-1D

Simulated Capture Zone from -150 ft, msl
SVP-12

Simulated Capture Zone from -250 ft, msl
SVP-12

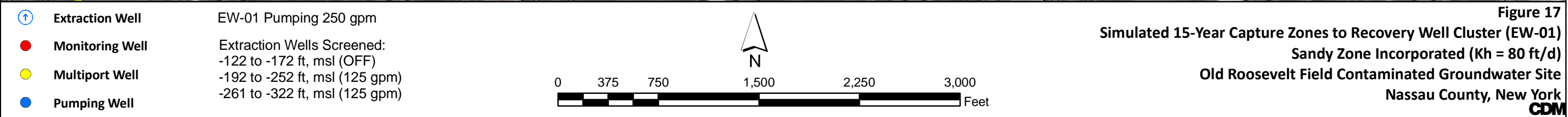
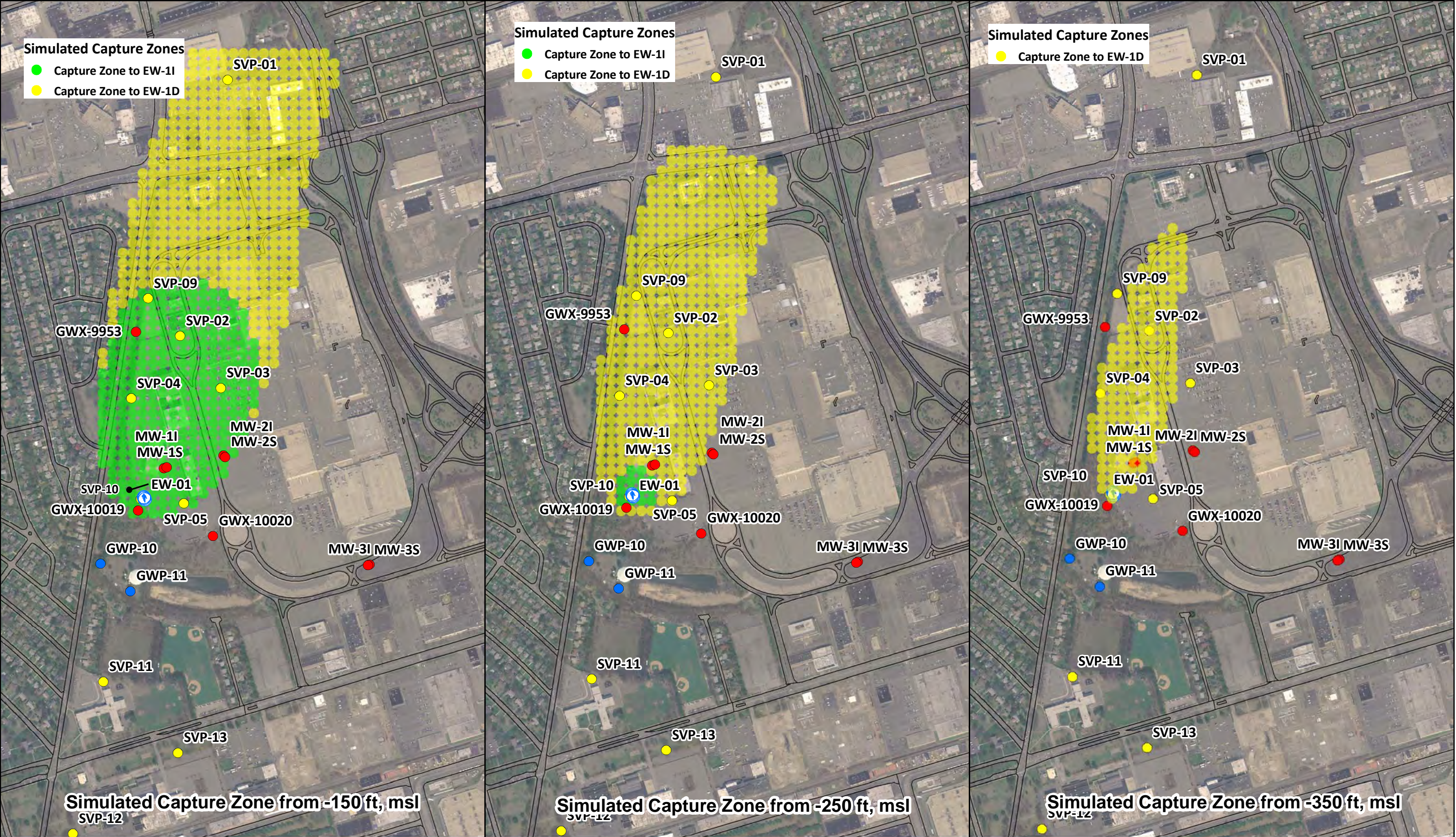
Simulated Capture Zone from -350 ft, msl
SVP-12

⬆ Extraction Well
● Monitoring Well
● Multiport Well
● Pumping Well

EW-01 Pumping 250 gpm
Extraction Wells Screened:
-122 to -172 ft, msl (70 gpm)
-192 to -252 ft, msl (70 gpm)
-261 to -322 ft, msl (110 gpm)

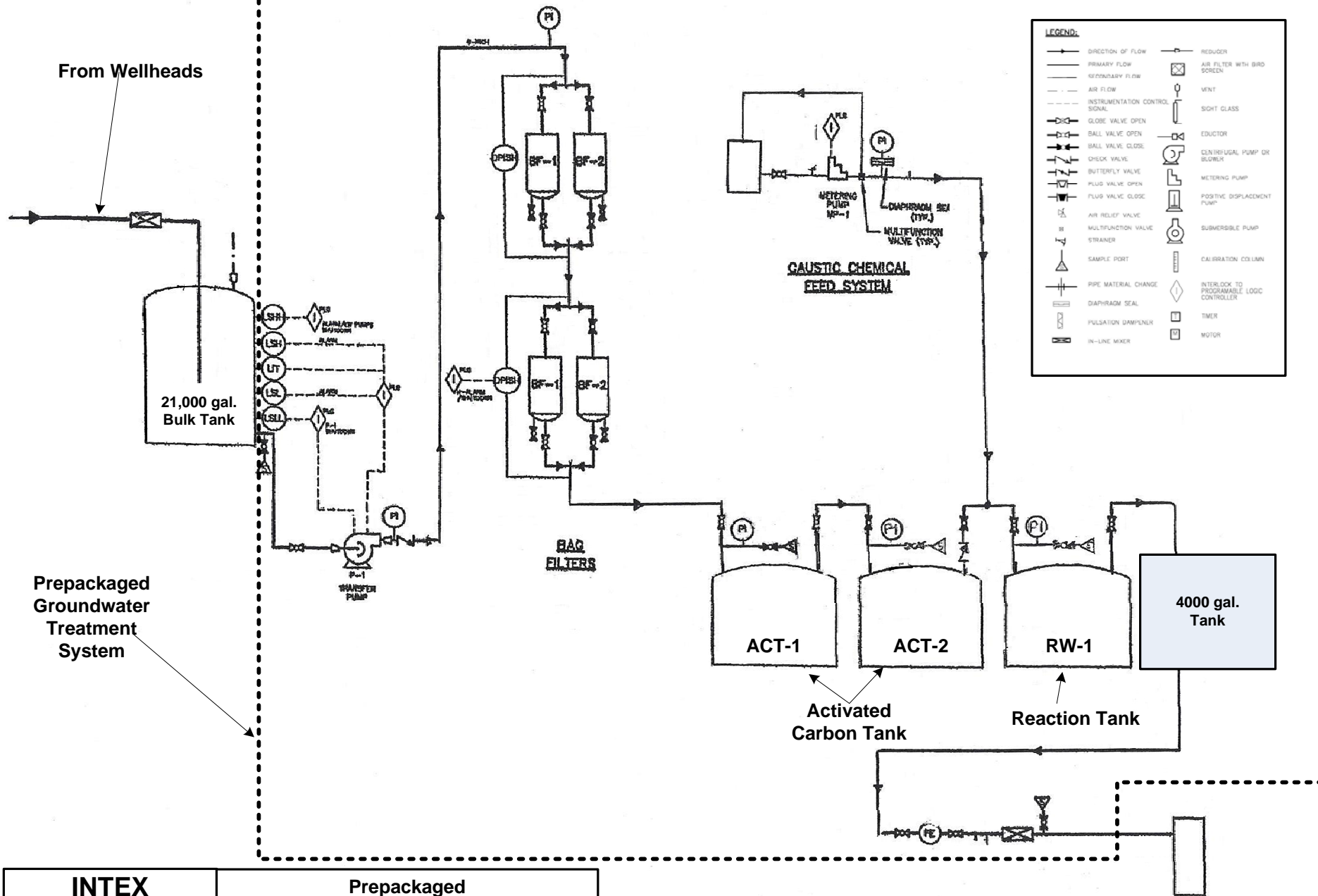
0 375 750 1,500 2,250 3,000 Feet

N



Appendix H

Temporary Water Treatment System P&ID and Completion Report



INTEX

Environmental Group, Inc
6205 Easton Road
Pipersville, PA 18947

215-766-7230
fax 215-766-9730
info@intexenv.com

Prepackaged Groundwater Treatment System

Old Roosevelt Field Site
Nassau County, New York

MOT

January 2010

Sheet 2



CDM Federal Programs
110 Fieldcrest Avenue, 6th Floor
Edison, New Jersey 08837

Attn: Muzaffar Ali Rahmani
Re: Water Treatment System Report #2, revised

The mobile waste water treatment system began operation at the Roosevelt field site on May 15, 2010. A total of 1,758,000 gallons of drilling-associated waste water were treated during the period of May 15 - September 10, 2010. Drilling operations generating waste water during this time period consisted of well installation, well development and step and continuous pumping tests.

The treatment system consisted of two, 21,000-gallon storage tanks for flow equalization and sedimentation, three pairs of duplex, high pressure bag filters, two carbon adsorption vessels containing 5,000 lbs virgin activated carbon each, and one 1,000 gallon discharge equalization tank

Initial groundwater samples were collected from the influent and the effluent holding tank during the first week of groundwater treatment. The treated water was held in the storage tank until the analytical results were obtained and submitted to CDM Federal. Based on the results of the initial sampling, CDM Federal authorized INTEX to discharge the treated effluent to the designated outfall, as stipulated in the RFP.

Table 1 presents a summary of the analytical results for the 11 sampling events conducted during the program. As directed, samples were collected at 200,000 gallon intervals. These results are compared to the Effluent Limitations stated in the Effluent Criteria for Old Roosevelt Field Groundwater Remediation Discharge, page 2 of 3. Complete laboratory analytical reports are provided in Appendix 1. Table 2 presents the cumulative discharge volumes during the project based on flowmeter readings taken at each sampling interval and Table 3 presents the treatment system flow detail on a daily basis. Peak Flow represents the flow rate immediately after bag changeout and Average Flow describes the flow rate over the life of the filter bag.

During the well development tasks, at times, water was delivered to the flow equalization/sedimentation tanks at rates estimated in excess of 350 gpm. At these loading rates, there was little or no opportunity for sedimentation to occur in the holding tank. The buffering capacity of the combined tanks allowed INTEX to keep the treatment rate in the design range, however there were unavoidable excursions as high as 290 gpm during this period. The high sediment loading during these periods did challenge the treatment system. Filter bags were changed out at 30 minute intervals, as determined by the pressure differential across the duplex filter housings.

Samples were collected on 8/24/10 for analyses, as required.. When the results were obtained on 9/01/10, exceedances of the Effluent Limitations were noted. It was determined that the likely cause of the elevated concentrations was short circuiting through the carbon units as a result of the high sediment loading. The next scheduled sample was collected and sent for analysis on 9/02/10 prior to any opportunity to take corrective action on the carbon units. On completion of the step test, the carbon units were backflushed to remedy the short circuiting that had resulted in elevated VOCs. The remaining analytical data going forward indicated that carbon units were functioning properly and no further exceedances occurred throughout the program. Therefore, the sediment loading on the carbon units occurring during the brief periods of high throughput is the probable cause of the short-term exceedances of the effluent targets.

If there are any questions, please do not hesitate to call me.

Sincerely yours,

INTEX Environmental Group, Inc.

A handwritten signature in cursive script that reads "Daniel FitzGerald".

Daniel FitzGerald

Vice President

cc Joan Baer, UniTech
 Joseph Jacobsen P.G., PhD, INTEX

Enclosure

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Table 1
Old Roosevelt Field Site
Effluent Sampling Times and Analytical Results (ug/L)

Compound	Effluent Targets	Initial Sampling 6/10/2010 1:15 PM	6/24/2010 3:00 PM	8/11/2010 3:35 PM	8/18/2010 11:30 AM	8/24/2010 8:30 AM	9/02/2010 2:30 PM	9/08/2010 12:15 AM	9/08/2010 1:48 PM	9/09/2010 3:21 AM	9/09/2010 4:55 PM	9/10/2010 6:30 AM
Dichlorodifluoromethane	5.0	ND	ND	ND	ND	2.48	7.27	ND	ND	ND	ND	ND
1,1, Dichloroethene	5.0	0.410 J	ND	ND	ND	ND	0.470 J	ND	ND	ND	ND	ND
cis -1,2, Dichloroethylene	5.0	ND	ND	ND	ND	0.380 J	0.940 J	ND	ND	ND	ND	ND
trans-1,2, Dichloroethylene	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	5.0	ND	ND	ND	ND	ND	3.28	ND	ND	ND	ND	ND
Methyl-tert-Butyl Ether (MTBE)	not specified	ND	ND	ND	ND	1.27	0.480 J	0.310 J	0.350 J	0.300 J	0.410 J	0.430 J
1,1,1, Trichloroethane	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5.0	0.880 J	ND	ND	1.85	8.79	9.53	0.590 J	ND	ND	ND	ND
Tetrachloroethylene	5.0	1.91	ND	ND	0.440 J	5.62	9.68	0.950 J	ND	ND	0.370 J	0.350 J
pH	6.5 - 8.5	7.4	NA	NA	6.85	6.75	6.41	6.8	6.8	6.8	6.8	6.8
Cumulative Discharge Volume (Gallons)			0	137,000	337,000	537,000	722,850	922,850	1,122,850	1,322,850	1,522,850	1,722,850
Total Gallons Discharged = 1,758,000												

Notes:

Bold type indicates the concentration exceeds the Effluent Target

ND = Constituent not detected

NA = Not Analyzed

J = Estimated concentration

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Table 2
Old Roosevelt Field Site
Discharge Volume (Gallons)

	Meter	Change	Cumulative
Start 6/24/2010 3:00 PM	6,654,000	0	0
8/11/2010 3:35 PM	6,791,000	137,000	137,000
8/18/2010 11:30 AM	6,991,000	200,000	337,000
8/24/2010 8:30 AM	7,191,000	200,000	537,000
9/02/2010 2:30 PM	7,376,850	185,850	722,850
9/08/2010 12:15 AM	7,576,850	200,000	922,850
9/08/2010 1:48 PM	7,776,850	200,000	1,122,850
9/09/2010 3:21 AM	7,976,850	200,000	1,322,850
9/09/2010 4:55 PM	8,176,850	200,000	1,522,850
9/10/2010 6:30 AM	8,376,850	200,000	1,722,850
Stop	8,412,000	35,150	1,758,000

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Table 3
Field Note Summary

Date	Volume (gallons)	Peak Flow (gallons)	Average Flow (gallons)	Comments
8/10/2010	43,500	275 gpm	170 gpm	well development
8/11/2010	93,000	290 gpm	192 gpm	well development
8/13/2010	52,800	275 gpm	220 gpm	well development
8/16/2010	89,000	275 gpm	214 gpm	well development
8/17/2010	43,000	275 gpm	218 gpm	well development
8/18/2010	73,450	275 gpm	204 gpm	well development
8/19/2010	81,750	275 gpm	205 gpm	well development
8/23/2010	58,100	275 gpm	175 gpm	well development
8/24/2010	78,500	265 gpm	163 gpm	well development
8/31/2010	31,850	265 gpm	162 gpm	Step test
9/1/2010	31,550	265 gpm	161 gpm	Step test
9/2/2010	56,650	265 gpm	157 gpm	Step test
9/7/2010	200,000	260 gpm	240 gpm	72 hour pumping test
9/8/2010	345,600	260 gpm	240 gpm	72 hour pumping test
9/9/2010	345,600	260 gpm	240 gpm	72 hour pumping test
9/10/2010	145,600	260 gpm	240 gpm	72 hour pumping test

F:\wp60\Dan\CDM\OLDROOSE\Data Rpt Table 3

APPENDIX 1

Effluent Lab Data



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1219461

Sample Number: L3407701-1
Sample Description: ROOSEVELT EFFLUENT
Received Temp: 36 F Iced (Y/N): Y

Samp. Date/Time/Temp: 06/24/10 03:00pm NA F
Sampled by: Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	06/30/10 05:06PM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	06/30/10 05:06PM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	06/30/10 05:06PM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	06/30/10 05:06PM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	06/30/10 05:06PM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	06/30/10 05:06PM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	06/30/10 05:06PM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	06/30/10 05:06PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	ND ug/l	0.230 ug/l*	06/30/10 05:06PM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	06/30/10 05:06PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	06/30/10 05:06PM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	06/30/10 05:06PM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	06/30/10 05:06PM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	06/30/10 05:06PM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	06/30/10 05:06PM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	06/30/10 05:06PM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	06/30/10 05:06PM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	06/30/10 05:06PM EEW
TRICHLOROETHENE	EPA 624	ND ug/l	0.310 ug/l*	06/30/10 05:06PM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	06/30/10 05:06PM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	06/30/10 05:06PM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	06/30/10 05:06PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	06/30/10 05:06PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	06/30/10 05:06PM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	06/30/10 05:06PM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	06/30/10 05:06PM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	06/30/10 05:06PM EEW
TETRACHLOROETHENE	EPA 624	ND ug/l	0.300 ug/l*	06/30/10 05:06PM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	06/30/10 05:06PM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	06/30/10 05:06PM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	06/30/10 05:06PM EEW

QC Laboratories

Analytical Report



Account No: AWO789, INTEX INC.
Project No: AWO789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1219461

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by	
L3407701-1	ROOSEVELT EFFLUENT	06/24/10 03:00pm NA F	Customer Sampled	
Parameter	Method	Result	RLs	Test Date, Time, Analyst
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	06/30/10 05:06PM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	06/30/10 05:06PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	06/30/10 05:06PM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	06/30/10 05:06PM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	06/30/10 05:06PM EEW
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	06/30/10 05:06PM EEW
NONE FOUND	EPA 624 LIB SR	ND		06/30/10 05:06PM EEW

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The test "pH lab" is analyzed upon receipt at the laboratory, the result will not be suitable for regulatory purposes.
- The reported results relate only to the samples.
- QC NELAP ID's: PA 09-00131, NJ PA166, FL E87954, NY 11223, CT PH-0768, DE PA-018, KY 90228, MD 206, EPA PA00018, Bioassay: PA 09-03574, NJ PA034, FL E87953, KS E10373, SC 89020001.
- QC STATE ID's: Wind Gap, NJ PA001, PA 48-01334; E RUTHERFORD NJ02015; Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.
- * - The "RLs" represents a reporting/quantitation limit. When an "*" is present immediately following the "RLs" units, the "RLs" is the Method Detection Limit (MDL).



QC Laboratories

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to: (if different) same

Lab LIMS No: L3407701

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

LAB USE ONLY:

Ascorbic/HCl Vials # 4 HCl Vials
Na₂S₂O₃
Na OH/Zn acetate pH
HNO₃ pH
H₂SO₄ pH
NaOH pH
Unpreserved
Hcl pH
Temp control ID#

ANALYSIS REQUESTED

Field pH, Temp (C or F),
DO, Cl₂, S. Cond. etc.

Client/Acct. No. INTOX

Address 6707 EASTON ROAD
PIPERVILLE PA

Sampling Site Address: (if different)

ROOSBURGH FIELD
GARDEN CITY NY

City/State/Zip 18947
Phone/Fax (215) 766-7230

P.O. No.

Client Contact DAN FIDLER

QC Contact

LAB USE ONLY

PROJECT

Collection

G
R
A
B

C
O
M
P

Matrix
Code

Number of Containers

FIELD ID

Date

Military Time

Total

H₂
S₂

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t

ROOSBURGH EFFLUENT

6-24-10 15:00

GW

4

4

UOA +10

dichlorodifluoromethane

1,1 dichloroethene

cis 1,2 dichloroethene

trans " "

SAMPLED BY: (Name/Company)

TAM DAVIS
INTOX

Verbal/fax data due:

Hardcopy due:

Report Format: ☒ Standard ☐ Forms

☐ Standard + QC ☐ NJ Reduced ☐ Disk

Field Parameters Analyzed By:

Sig:

Date/Time:

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY METHOD: <input type="checkbox"/> QC COURIER <input type="checkbox"/> CLIENT <input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	Custody Seal Number
1 <u>TAM DAVIS</u>	<u>6/24/10</u>	<u>8:30pm</u>	1 <u> </u>	<u> </u>	<u> </u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	COMMENTS: <u>New York State GA standards</u>	
2 <u>Dan Fidler</u>	<u>6/25/10</u>	<u>1400</u>	2 <u> </u>	<u>6/25/10</u>	<u>1420</u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
3 <u>Joan E. Smith</u>	<u>6/25/10</u>	<u>1730</u>	3 <u> </u>	<u>6/25/10</u>	<u>1730</u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
4 <u> </u>	<u> </u>	<u> </u>	4 <u> </u>	<u> </u>	<u> </u>	Hazardous: yes / no	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
5 <u> </u>	<u> </u>	<u> </u>	5 <u> </u>	<u> </u>	<u> </u>		

For example to aid completion, see reverse side.

FINAL REPORT



GREG VAN HOOK
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

GREG VAN HOOK
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1233629

Sample Number L3476402-1
Sample Description ROOSEVELT FIELD, LONG ISLAND* EFFLUENT GRAB
Received Temp: 36 F Iced (Y/N): Y

Samp. Date/Time/Temp
08/11/10 03:35pm NA F

Sampled by
Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	08/19/10 02:33AM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	08/19/10 02:33AM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	08/19/10 02:33AM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	08/19/10 02:33AM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	08/19/10 02:33AM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	08/19/10 02:33AM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	08/19/10 02:33AM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	08/19/10 02:33AM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	ND ug/l	0.230 ug/l*	08/19/10 02:33AM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	08/19/10 02:33AM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	08/19/10 02:33AM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	08/19/10 02:33AM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	08/19/10 02:33AM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	08/19/10 02:33AM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	08/19/10 02:33AM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	08/19/10 02:33AM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	08/19/10 02:33AM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	08/19/10 02:33AM EEW
TRICHLOROETHENE	EPA 624	ND ug/l	0.310 ug/l*	08/19/10 02:33AM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	08/19/10 02:33AM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	08/19/10 02:33AM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	08/19/10 02:33AM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	08/19/10 02:33AM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	08/19/10 02:33AM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	08/19/10 02:33AM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	08/19/10 02:33AM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	08/19/10 02:33AM EEW
TETRACHLOROETHENE	EPA 624	ND ug/l	0.300 ug/l*	08/19/10 02:33AM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	08/19/10 02:33AM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	08/19/10 02:33AM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	08/19/10 02:33AM EEW

Thomas J. Hines
Thomas J. Hines, President

QC Laboratories

Analytical Report



Account No: AW0789, INTEX INC.
Project No: AW0789, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1233629

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by	
L3476402-1	ROOSEVELT FIELD, LONG ISLAND* EFFLUENT GRAB	08/11/10 03:35pm NA F	Customer Sampled	
Parameter	Method	Result	RLs	Test Date, Time, Analyst
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	08/19/10 02:33AM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	08/19/10 02:33AM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	08/19/10 02:33AM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	08/19/10 02:33AM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	08/19/10 02:33AM EEW
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	08/19/10 02:33AM EEW
NONE FOUND	EPA 624 LIB SR	ND		08/19/10 02:33AM EEW

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The test "pH lab" is analyzed upon receipt at the laboratory, the result will not be suitable for regulatory purposes.
- The reported results relate only to the samples.
- QC NELAP ID's: PA 09-00131, NJ PA166, FL E87954, NY 11223, CT PH-0768, DE PA-018, KY 90228, MD 206, EPA PA00018. Bioassay: PA 09-03574, NJ PA034, FL E87953, KS E10373, SC 89020001.
- QC STATE ID's: Wind Gap, NJ PA001, PA 48-01334; E RUTHERFORD NJ02015; Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAP unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.
- * - The "RLs" represents a reporting/quantitation limit. When an "*" is present immediately following the "RLs" units, the "RLs" is the Method Detection Limit (MDL).



QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514

Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to: (if different)

Sampling Site Address: (if different)

P.O. No.

QC Contact

Lab LIMS No:

LAB USE ONLY:

4 Ascorbic/HCl Vials # 3 HCl Vials 8/13/10
Na₂S₂O₃
Na OH/Zn acetate pH
HNO₃ pH
H₂SO₄ pH
NaOH pH
Unpreserved
Hcl pH
Temp control 12 = 36-F (General)

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Field pH, Temp (C or F),
DO, Cl₂, S. Cond. etc.

PROJECT

Collection

G
R
A
B

C
O
M
P

M
A
T
R
I
X

C
O
D
E

Number of Containers

T
O
T
A
L

H
2
O
4

H
C
l

V
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l
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H
N
O
3

N
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Z
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v
e
d

B
a
c
t

FIELD ID

Date

Military Time

EFFLUENT

8/11/10 15:35

X

GW

4

X

ANALYSIS REQUESTED

VOL

SAMPLED BY: (Name/Company)

T.D. INTER

Verbal/fax data due: / /

Hardcopy due: / /

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Report Format: ☒ Standard ☐ Forms

☒ Disk ☐ NJ Reduced ☒ Disk

Field Parameters Analyzed By:

Sig:

Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY METHOD: <input type="checkbox"/> QC COURIER <input type="checkbox"/> CLIENT	Custody Seal Number
1 CLIENT	8/13/10	1010	1 [Signature]	8/13/10	1010	<input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	
2 [Signature]	8/13/10	1930	2 [Signature]	8/13/10	1930	COMMENTS:	
3	DATE	TIME	3 RECEIVED BY	DATE	TIME		
4	DATE	TIME	4 RECEIVED BY	DATE	TIME		
5	DATE	TIME	5 RECEIVED BY	DATE	TIME		

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Aug 13 2010, 10:10 am



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Project No.: AW0789 FITZGERALD
Phone: (215) 766-7230
Fax: (215) 766-9730
Cell: () -

Primary Driver: JCN

Service Date: 08/13/10 To 08/13/10

PICK-UP

Delivery Charge:

Day of Week: FRI

Sampling Instructions:
PLEASE PICK UP SAMPLES

Contact: DAN

Bottle Prep:

Rush Samples:

Service to be performed at:

PLEASE PICK UP SAMPLES (JOAN SAID SHE CAN DO THIS TODAY)

Requested by: Rachel A. DeCarlo Ext: 3365
Entry date: 08/13/10 10:10AM

Call received: 08/13/10 08:58AM

Field Service Request No.: FS141779
Service Time: 10 minutes
Equip Code: PU



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AWO789, INTEX INC.
Project No: AWO789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1235149

Sample Number L3483423-1
Sample Description ROOSEVELT FIELD, GARDEN CITY NY* EFFLUENT
Samp. Date/Time/Temp 08/18/10 11:30am NA F
Sampled by Customer Sampled
Received Temp 37 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
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GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	08/23/10 08:08PM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	08/23/10 08:08PM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	08/23/10 08:08PM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	08/23/10 08:08PM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	08/23/10 08:08PM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	08/23/10 08:08PM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	08/23/10 08:08PM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	08/23/10 08:08PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	ND ug/l	0.230 ug/l*	08/23/10 08:08PM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	08/23/10 08:08PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	08/23/10 08:08PM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	08/23/10 08:08PM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	08/23/10 08:08PM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	08/23/10 08:08PM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	08/23/10 08:08PM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	08/23/10 08:08PM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	08/23/10 08:08PM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	08/23/10 08:08PM EEW
TRICHLOROETHENE	EPA 624	1.85 ug/l	0.310 ug/l*	08/23/10 08:08PM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	08/23/10 08:08PM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	08/23/10 08:08PM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	08/23/10 08:08PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	08/23/10 08:08PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	08/23/10 08:08PM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	08/23/10 08:08PM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	08/23/10 08:08PM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	08/23/10 08:08PM EEW
TETRACHLOROETHENE	EPA 624	0.440 J ug/l	0.300 ug/l*	08/23/10 08:08PM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	08/23/10 08:08PM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	08/23/10 08:08PM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	08/23/10 08:08PM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	08/23/10 08:08PM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	08/23/10 08:08PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	08/23/10 08:08PM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	08/23/10 08:08PM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	08/23/10 08:08PM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1235149

Sample Number L3483423-1
Sample Description ROOSEVELT FIELD, GARDEN CITY NY* EFFLUENT
Samp. Date/Time/Temp 08/18/10 11:30am NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	08/23/10 08:08PM EEW
NONE FOUND	EPA 624 LIB SR	ND		08/23/10 08:08PM EEW

**** NOTES CONCERNING THE ABOVE SAMPLE ****

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The test "pH lab" is analyzed upon receipt in the laboratory, the result will not be suitable for regulatory purposes.
- The reported results relate only to the samples.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=Laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count.
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- QC NELAP ID's: PA 09-00131, NJ PA166, FL E87954, NY 11223, CT PH-0768, DE PA-018, KY 90228, MD 206, EPA PA00018. Bioassay: PA 09-03574, NJ PA034, FL E87953, KS E10373, SC 89020001.
- QC STATE ID's: Wind Gap, NJ PA001, PA 48-01334; E RUTHERFORD NJ02015; Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter, PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.
- * - The "RLs" represents a reporting/quantitation limit. When an "*" is present immediately following the "RLs" units, the "RLs" is the Method Detection Limit (MDL).



1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to: (if different)

Client/Acct. No. INTX CUNAROW MOUNTAIN

Address 6907 A EASTON ROAD

City/State/Zip PIEDMONT PA 18947

Phone/Fax (215) 766-7230

Client Contact DAN FITZGERALD

Sampling Site Address: (if different)

ROOSEVELT FIELD

GARDEN CITY, NEW YORK

P.O. No.

QC Contact

Lab LIMS No:

L3483423

LAB USE ONLY:

Ascorbic/HCl Vials # 4 HCl Vials

Na₂S₂O₃

Na OH/Zn acetate pH

HNO₃ pH

H₂SO₄ pH

NaOH pH

Unpreserved

37 Hcl pH

37 Temp control QC ID# XEH

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

Field pH, Temp (C or F),
DO, Cl₂, S. Cond. etc.

PROJECT

Collection

G R A B

C O M P

Matrix Code

Number of Containers

FIELD ID

Date

Military Time

Total

H₂O₄

HCl

Y₂S₃

HNO₃

NaOH

ZnAc

Unpres

Bact

ANALYSIS REQUESTED

EFFLUENT

8/18/10

11:30

X

60

4

4

4

4

4

4

4

4

4

4

4

4

4

4

4

4

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4

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4

4

4

4

4

4

4

4

DOA to plus dichlorodifluoromethane PH 6.88
and as 1,2 dichloroethane

SAMPLED BY: (Name/Company)

INTX
TOSS DANIEL

Verbal/fax data due: / /

Hardcopy due: / /

Report Format: ☐ Standard ☐ Forms

☒ Standard + QC ☐ NJ Reduced ☐ Disk

Field Parameters Analyzed By:

Sig:

Date/Time:

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

SAMPLE CHAIN OF CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY METHOD: <input type="checkbox"/> QC COURIER <input type="checkbox"/> CLIENT	Custody Seal Number
1 <u>Toss Daniel</u>	<u>8/20/10</u>	<u>1150</u>	1 <u>Sydney Hughes</u>	<u>8/20/10</u>	<u>1150</u>	<input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	COMMENTS:	
2 <u>Sydney Hughes</u>	<u>8/20/10</u>	<u>1415</u>	2 <u>Olga</u>	<u>8/20/10</u>	<u>1415</u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
3 <u>Olga</u>			3 <u>Olga</u>				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
4 <u>Olga</u>			4 <u>Olga</u>				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	Hazardous: yes / no	
5 <u>Olga</u>			5 <u>Olga</u>				

For example to aid completion, see reverse side.

FINAL REPORT



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1236506

Sample Number L3487948-1
Sample Description ROOSEVELT FIELD, EFFLUENT GRAB
Samp. Date/Time/Temp 08/24/10 08:30am NA F
Sampled by Customer Sampled
Received Temp 36 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
-----------	--------	--------	-----	--------------------------

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	2.48 ug/l	0.620 ug/l*	08/30/10 10:31PM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	08/30/10 10:31PM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	08/30/10 10:31PM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	08/30/10 10:31PM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	08/30/10 10:31PM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	08/30/10 10:31PM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	08/30/10 10:31PM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	08/30/10 10:31PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	1.27 ug/l	0.230 ug/l*	08/30/10 10:31PM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	08/30/10 10:31PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	08/30/10 10:31PM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	08/30/10 10:31PM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	08/30/10 10:31PM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	0.380 J ug/l	0.200 ug/l*	08/30/10 10:31PM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	08/30/10 10:31PM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	08/30/10 10:31PM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	08/30/10 10:31PM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	08/30/10 10:31PM EEW
TRICHLOROETHENE	EPA 624	8.79 ug/l	0.310 ug/l*	08/30/10 10:31PM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	08/30/10 10:31PM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	08/30/10 10:31PM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	08/30/10 10:31PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	08/30/10 10:31PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	08/30/10 10:31PM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	08/30/10 10:31PM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	08/30/10 10:31PM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	08/30/10 10:31PM EEW
TETRACHLOROETHENE	EPA 624	5.62 ug/l	0.300 ug/l*	08/30/10 10:31PM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	08/30/10 10:31PM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	08/30/10 10:31PM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	08/30/10 10:31PM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	08/30/10 10:31PM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	08/30/10 10:31PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	08/30/10 10:31PM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	08/30/10 10:31PM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	08/30/10 10:31PM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1236506

Sample Number L3487948-1
Sample Description ROOSEVELT FIELD, EFFLUENT GRAB
Samp. Date/Time/Temp 08/24/10 08:30am NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	08/30/10 10:31PM EEW
NONE FOUND	EPA 624 LIB SR	ND		08/30/10 10:31PM EEW

**** NOTES CONCERNING THE ABOVE SAMPLE ****

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The test "pH lab" is analyzed upon receipt in the laboratory, the result will not be suitable for regulatory purposes.
- The reported results relate only to the samples.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=Laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count.
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- QC NELAP ID's: PA 09-00131, NJ PA166, FL E87954, NY 11223, CT PH-0768, DE PA-018, KY 90228, MD 206, EPA PA00018. Bioassay: PA 09-03574, NJ PA034, FL E87953, KS E10373, SC 89020001.
- QC STATE ID's: Wind Gap, NJ PA001, PA 48-01334; E RUTHERFORD NJ02015; Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter, PLs=customer specific permit limits.
- The test results meet all requirements of NELAP unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.
- * - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit or MDL.

Thomas J. Hines
Thomas J. Hines, President



1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to: (if different)

SAME

Client/Acct. No. INTEX ENVIRONMENTAL

Address 6507 A EASTON ROAD

City/State/Zip PIAUSVILLE PA 18947

Phone/Fax (215) 766-7230

Client Contact DAW FERGUSON

Sampling Site Address: (if different) ROOSEVELT AVE

400 RING ROAD

GARDEN CITY, NY

P.O. No.

QC Contact

Lab LIMS No:

L3487948

LAB USE ONLY:

Ascorbic/HCl Vials # 4 HCl Vials

Na₂S₂O₃

Na OH/Zn acetate pH

HNO₃ pH

H₂SO₄ pH

NaOH pH

Unpreserved

Hcl pH

Temp control ID# 12366 (initial)

ANALYSIS REQUESTED

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

Field pH, Temp (C or F),
DO, Cl₂, S. Cond. etc.

LAB USE ONLY

PROJECT

Collection

G R A B

C O M P

Matrix Code

Number of Containers

FIELD ID

Date

Military Time

Total

H₂

Cl

Y

S

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8-24-10

8:30

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4

VOA + 10 plus dichlorodifluoromethane PM 6.75
and cis 1,2 dichloroethylene

SAMPLED BY: (Name/Company)

Tara DAVILA
INTEX

Verbal/fax data due: / /

Hardcopy due: / /

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Report Format: ☐ Standard ☐ Forms

☒ Standard + QC ☐ NJ Reduced ☐ Disk

Field Parameters Analyzed By:

Sig:

Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY METHOD: <input type="checkbox"/> QC COURIER <input type="checkbox"/> CLIENT	Custody Seal Number
1 <u>[Signature]</u>	<u>8/26/10</u>	<u>0940</u>	1 <u>[Signature]</u>	<u>8/26/10</u>	<u>0940</u>	<input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	
2 <u>[Signature]</u>	<u>8/26/10</u>	<u>1050</u>	2 <u>[Signature]</u>	<u>8/26/10</u>	<u>1050</u>	COMMENTS:	
3	DATE	TIME	3	DATE	TIME		
4	DATE	TIME	4	DATE	TIME		
5	DATE	TIME	5	DATE	TIME		

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AWO789, INTEX INC.
Project No: AWO789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1242272

Sample Number L3501663-1
Sample Description ROOSEVELT FIELD* EFFLUENT GRAB
Samp. Date/Time/Temp 09/02/10 02:30pm NA F
Sampled by Customer Sampled
Received Temp 35 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
-----------	--------	--------	-----	--------------------------

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	7.27 ug/l	0.620 ug/l*	09/08/10 05:43PM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	09/08/10 05:43PM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	09/08/10 05:43PM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	09/08/10 05:43PM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	09/08/10 05:43PM EEW
TRICHLOROFLUOROMETHANE	EPA 624	3.28 ug/l	0.470 ug/l*	09/08/10 05:43PM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	09/08/10 05:43PM EEW
1,1-DICHLOROETHENE	EPA 624	0.470 J ug/l	0.290 ug/l*	09/08/10 05:43PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	0.480 J ug/l	0.230 ug/l*	09/08/10 05:43PM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	09/08/10 05:43PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	09/08/10 05:43PM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	09/08/10 05:43PM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	09/08/10 05:43PM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	0.940 J ug/l	0.200 ug/l*	09/08/10 05:43PM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	09/08/10 05:43PM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	09/08/10 05:43PM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	09/08/10 05:43PM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/08/10 05:43PM EEW
TRICHLOROETHENE	EPA 624	9.53 ug/l	0.310 ug/l*	09/08/10 05:43PM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	09/08/10 05:43PM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	09/08/10 05:43PM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	09/08/10 05:43PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	09/08/10 05:43PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	09/08/10 05:43PM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	09/08/10 05:43PM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	09/08/10 05:43PM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	09/08/10 05:43PM EEW
TETRACHLOROETHENE	EPA 624	9.68 ug/l	0.300 ug/l*	09/08/10 05:43PM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	09/08/10 05:43PM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	09/08/10 05:43PM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	09/08/10 05:43PM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	09/08/10 05:43PM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	09/08/10 05:43PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/08/10 05:43PM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	09/08/10 05:43PM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	09/08/10 05:43PM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1242272

Sample Number L3501663-1
Sample Description ROOSEVELT FIELD* EFFLUENT GRAB
Samp. Date/Time/Temp 09/02/10 02:30pm NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	09/08/10 05:43PM EEW
SULFUR DIOXIDE	EPA 624 LIB SR	3.53 JN ug/l		09/08/10 05:43PM EEW

**** NOTES CONCERNING THE ABOVE SAMPLE ****

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The test "pH lab" is analyzed upon receipt in the laboratory, the result will not be suitable for regulatory purposes.
- The reported results relate only to the samples.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=Laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count.
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- QC NELAP ID's: PA 09-00131, NJ PA166, FL E87954, NY 11223, CT PH-0768, DE PA-018, KY 90228, MD 206, EPA PA00018. Bioassay: PA 09-03574, NJ PA034, FL E87953, KS E10373, SC 89020001.
- QC STATE ID's: Wind Gap, NJ PA001, PA 48-01334; E RUTHERFORD NJ02015; Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter, PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.
- * - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit or MDL.



1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to: (if different)

SAME

Client/Acct. No.

INTEX

Address

6907 A EASON ROAD

Sampling Site Address: (if different)

ROOSEVELT FIELD

City/State/Zip

PIPERSDILLE, PA

GARDEN CITY, NY

Phone/Fax

215 766 7230

P.O. No.

Client Contact

DAN FITZGERALD

QC Contact

Lab LIMS No:

23581663

LAB USE ONLY:

Ascorbic/HCl Vials # 4 HCl Vials

Na₂S₂O₃

Na OH/Zn acetate pH

HNO₃ pH

H₂SO₄ pH

NaOH pH

Unpreserved

Hcl pH

Temp control

IR#

TECHNICAL

ANALYSIS REQUESTED

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

Field pH, Temp (C or F),
DO, Cl₂, S. Cond. etc.

LAB USE ONLY

PROJECT

Collection

GRAB

COMP

Matrix

Code

Number of Containers

FIELD ID

Date

Military Time

Total

H₂O

HCl

Y

HNO₃

NaOH

Na₂S₂O₃

Unpres

Hcl

Bact

Temp

EFFLUENT

9-2-10 14:30

X

6W

4

X

UOA + 10 PLUS dichloro difluoromethane PH 6.41
AND CIS 1,2, dichloro ethylene

SAMPLED BY: (Name/Company)

TONS DADIEL
INTEX

Verbal/fax data due: / /

Hardcopy due: / /

Report Format: ☐ Standard ☐ Forms

☒ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:

Sig:

Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY METHOD: <input type="checkbox"/> QC COURIER <input type="checkbox"/> CLIENT	Custody Seal Number
1	9/3/10	1500	1	9/3/10	1500	<input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	COMMENTS:	
2	9/3/10	1500	2	9/3/10	1500		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
3			3				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
4			4				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
5			5				

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Sep 02 2010, 03:25 pm



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Project No.: AW0789 FITZGERALD
Phone: (215) 766-7230
Fax: (215) 766-9730
Cell: () -

Primary Driver: JCN

Service Date: 09/03/10 - PICKUP... To 09/03/10

PICK-UP

Delivery Charge:

Day of Week: FRI

Sampling Instructions:

Contact: TODD OR DAN

Bottle Prep:

Rush Samples:

Service to be performed at:

PLEASE SCHEDULE... PICKUP... FOR FRIDAY 9/3/10ROSEVELT FIELD VOCS .
..... 624-MTX+LS INCLUDE DICHLORODIFLUOROMETHANE, CIS-1,2-
DICHLOROETHYLENE.

Requested by: Robert F. Hulit Ext:
Entry date: 09/02/10 03:25PM

Call received: 09/02/10 03:23PM

Field Service Request No.: FS142995
Service Time: 10 minutes
Equip Code: PU



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-1
Sample Description ROOSEVELT FIELD* 9/8 EFFLUENT
Samp. Date/Time/Temp 09/08/10 12:15am NA F
Sampled by Customer Sampled
Received Temp 35 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
-----------	--------	--------	-----	--------------------------

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	09/15/10 11:37PM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	09/15/10 11:37PM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	09/15/10 11:37PM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	09/15/10 11:37PM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	09/15/10 11:37PM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	09/15/10 11:37PM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	09/15/10 11:37PM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	09/15/10 11:37PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	0.310 J ug/l	0.230 ug/l*	09/15/10 11:37PM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	09/15/10 11:37PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	09/15/10 11:37PM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	09/15/10 11:37PM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	09/15/10 11:37PM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	09/15/10 11:37PM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	09/15/10 11:37PM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	09/15/10 11:37PM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	09/15/10 11:37PM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/15/10 11:37PM EEW
TRICHLOROETHENE	EPA 624	0.590 J ug/l	0.310 ug/l*	09/15/10 11:37PM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	09/15/10 11:37PM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	09/15/10 11:37PM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	09/15/10 11:37PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	09/15/10 11:37PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	09/15/10 11:37PM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	09/15/10 11:37PM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	09/15/10 11:37PM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	09/15/10 11:37PM EEW
TETRACHLOROETHENE	EPA 624	0.950 J ug/l	0.300 ug/l*	09/15/10 11:37PM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	09/15/10 11:37PM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	09/15/10 11:37PM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	09/15/10 11:37PM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	09/15/10 11:37PM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	09/15/10 11:37PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/15/10 11:37PM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	09/15/10 11:37PM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	09/15/10 11:37PM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-1
Sample Description ROOSEVELT FIELD* 9/8 EFFLUENT
Samp. Date/Time/Temp 09/08/10 12:15am NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	09/15/10 11:37PM EEW
NONE FOUND	EPA 624 LIB SR	ND		09/15/10 11:37PM EEW

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-2
Sample Description 9/8 EFFLUENT GRAB
Samp. Date/Time/Temp 09/08/10 01:48pm NA F
Sampled by Customer Sampled
Received Temp 35 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
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GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	09/16/10 12:13AM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	09/16/10 12:13AM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	09/16/10 12:13AM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	09/16/10 12:13AM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 12:13AM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	09/16/10 12:13AM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	09/16/10 12:13AM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	09/16/10 12:13AM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	0.350 J ug/l	0.230 ug/l*	09/16/10 12:13AM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	09/16/10 12:13AM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 12:13AM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:13AM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 12:13AM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 12:13AM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:13AM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	09/16/10 12:13AM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 12:13AM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:13AM EEW
TRICHLOROETHENE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 12:13AM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:13AM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 12:13AM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 12:13AM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	09/16/10 12:13AM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	09/16/10 12:13AM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 12:13AM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	09/16/10 12:13AM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 12:13AM EEW
TETRACHLOROETHENE	EPA 624	ND ug/l	0.300 ug/l*	09/16/10 12:13AM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 12:13AM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:13AM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	09/16/10 12:13AM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	09/16/10 12:13AM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:13AM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:13AM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	09/16/10 12:13AM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:13AM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-2
Sample Description 9/8 EFFLUENT GRAB
Samp. Date/Time/Temp 09/08/10 01:48pm NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 12:13AM EEW
NONE FOUND	EPA 624 LIB SR	ND		09/16/10 12:13AM EEW

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-3
Sample Description 9/9 EFFLUENT GRAB
Samp. Date/Time/Temp 09/09/10 03:21am NA F
Sampled by Customer Sampled
Received Temp 35 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
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GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	09/16/10 12:50AM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	09/16/10 12:50AM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	09/16/10 12:50AM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	09/16/10 12:50AM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 12:50AM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	09/16/10 12:50AM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	09/16/10 12:50AM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	09/16/10 12:50AM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	0.300 J ug/l	0.230 ug/l*	09/16/10 12:50AM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	09/16/10 12:50AM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 12:50AM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:50AM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 12:50AM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 12:50AM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:50AM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	09/16/10 12:50AM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 12:50AM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:50AM EEW
TRICHLOROETHENE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 12:50AM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:50AM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 12:50AM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 12:50AM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	09/16/10 12:50AM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	09/16/10 12:50AM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 12:50AM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	09/16/10 12:50AM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 12:50AM EEW
TETRACHLOROETHENE	EPA 624	ND ug/l	0.300 ug/l*	09/16/10 12:50AM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 12:50AM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 12:50AM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	09/16/10 12:50AM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	09/16/10 12:50AM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:50AM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:50AM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	09/16/10 12:50AM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 12:50AM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-3
Sample Description 9/9 EFFLUENT GRAB
Samp. Date/Time/Temp 09/09/10 03:21am NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 12:50AM EEW
NONE FOUND	EPA 624 LIB SR	ND		09/16/10 12:50AM EEW

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-4
Sample Description 9/9 EFFLUENT GRAB
Samp. Date/Time/Temp 09/09/10 04:55pm NA F
Sampled by Customer Sampled
Received Temp 35 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
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GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	09/16/10 01:26AM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	09/16/10 01:26AM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	09/16/10 01:26AM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	09/16/10 01:26AM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 01:26AM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	09/16/10 01:26AM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	09/16/10 01:26AM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	09/16/10 01:26AM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	0.410 J ug/l	0.230 ug/l*	09/16/10 01:26AM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	09/16/10 01:26AM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 01:26AM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 01:26AM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 01:26AM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 01:26AM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 01:26AM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	09/16/10 01:26AM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 01:26AM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 01:26AM EEW
TRICHLOROETHENE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 01:26AM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 01:26AM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 01:26AM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 01:26AM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	09/16/10 01:26AM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	09/16/10 01:26AM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 01:26AM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	09/16/10 01:26AM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 01:26AM EEW
TETRACHLOROETHENE	EPA 624	0.370 J ug/l	0.300 ug/l*	09/16/10 01:26AM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 01:26AM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 01:26AM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	09/16/10 01:26AM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	09/16/10 01:26AM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 01:26AM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 01:26AM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	09/16/10 01:26AM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 01:26AM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-4
Sample Description 9/9 EFFLUENT GRAB
Samp. Date/Time/Temp 09/09/10 04:55pm NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 01:26AM EEW
NONE FOUND	EPA 624 LIB SR	ND		09/16/10 01:26AM EEW

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-5
Sample Description 9/10 EFFLUENT GRAB
Samp. Date/Time/Temp 09/10/10 06:30am NA F
Sampled by Customer Sampled
Received Temp 35 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
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GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES

DICHLORODIFLUOROMETHANE	EPA 624	ND ug/l	0.620 ug/l*	09/16/10 02:02AM EEW
CHLOROMETHANE	EPA 624	ND ug/l	0.430 ug/l*	09/16/10 02:02AM EEW
VINYL CHLORIDE	EPA 624	ND ug/l	0.350 ug/l*	09/16/10 02:02AM EEW
BROMOMETHANE	EPA 624	ND ug/l	0.370 ug/l*	09/16/10 02:02AM EEW
CHLOROETHANE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 02:02AM EEW
TRICHLOROFLUOROMETHANE	EPA 624	ND ug/l	0.470 ug/l*	09/16/10 02:02AM EEW
TERTIARY BUTYL ALCOHOL	EPA 624	ND ug/l	6.13 ug/l*	09/16/10 02:02AM EEW
1,1-DICHLOROETHENE	EPA 624	ND ug/l	0.290 ug/l*	09/16/10 02:02AM EEW
METHYL TERTIARY BUTYL ETHER	EPA 624	0.430 J ug/l	0.230 ug/l*	09/16/10 02:02AM EEW
METHYLENE CHLORIDE	EPA 624	ND ug/l	0.500 ug/l	09/16/10 02:02AM EEW
TRANS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 02:02AM EEW
1,1-DICHLOROETHANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 02:02AM EEW
CARBON TETRACHLORIDE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 02:02AM EEW
CIS-1,2-DICHLOROETHENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 02:02AM EEW
CHLOROFORM	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 02:02AM EEW
1,1,1-TRICHLOROETHANE	EPA 624	ND ug/l	0.260 ug/l*	09/16/10 02:02AM EEW
BENZENE	EPA 624	ND ug/l	0.230 ug/l*	09/16/10 02:02AM EEW
1,2-DICHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 02:02AM EEW
TRICHLOROETHENE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 02:02AM EEW
1,2-DICHLOROPROPANE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 02:02AM EEW
BROMODICHLOROMETHANE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 02:02AM EEW
TOLUENE	EPA 624	ND ug/l	0.240 ug/l*	09/16/10 02:02AM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.170 ug/l*	09/16/10 02:02AM EEW
CIS-1,3-DICHLOROPROPENE	EPA 624	ND ug/l	0.140 ug/l*	09/16/10 02:02AM EEW
1,1,2-TRICHLOROETHANE	EPA 624	ND ug/l	0.320 ug/l*	09/16/10 02:02AM EEW
2-CHLOROETHYL VINYL ETHER	EPA 624	ND ug/l	0.490 ug/l*	09/16/10 02:02AM EEW
DIBROMOCHLOROMETHANE	EPA 624	ND ug/l	0.310 ug/l*	09/16/10 02:02AM EEW
TETRACHLOROETHENE	EPA 624	0.350 J ug/l	0.300 ug/l*	09/16/10 02:02AM EEW
CHLOROBENZENE	EPA 624	ND ug/l	0.280 ug/l*	09/16/10 02:02AM EEW
ETHYL BENZENE	EPA 624	ND ug/l	0.220 ug/l*	09/16/10 02:02AM EEW
M&P XYLENES	EPA 624	ND ug/l	0.400 ug/l*	09/16/10 02:02AM EEW
O-XYLENE	EPA 624	ND ug/l	0.190 ug/l*	09/16/10 02:02AM EEW
BROMOFORM	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 02:02AM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 02:02AM EEW
1,3-DICHLOROBENZENE	EPA 624	ND ug/l	0.180 ug/l*	09/16/10 02:02AM EEW
1,4-DICHLOROBENZENE	EPA 624	ND ug/l	0.250 ug/l*	09/16/10 02:02AM EEW

QC Laboratories

Analytical Report



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Regarding:

DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Account No: AW0789, INTEX INC.
Project No: AW0789 FITZGERALD, INTEX INC.

P.O. No:
PWSID No:

Inv. No: 1243421

Sample Number L3504489-5
Sample Description 9/10 EFFLUENT GRAB
Sample Date/Time/Temp 09/10/10 06:30am NA F
Sampled by Customer Sampled

Parameter	Method	Result	RLs	Test Date, Time, Analyst
1,2-DICHLOROBENZENE	EPA 624	ND ug/l	0.200 ug/l*	09/16/10 02:02AM EEW
NONE FOUND	EPA 624 LIB SR	ND		09/16/10 02:02AM EEW

QUALIFIERS: For metals parameters; "B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B" is when the compound is found in the blank as well as in the sample; "J" indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search; "E" (estimated) is when a compound exceeded the calibration range; "N" presumptive evidence of a compound; "D" is when a dilution was required.

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The test "pH lab" is analyzed upon receipt in the laboratory, the result will not be suitable for regulatory purposes.
- The reported results relate only to the samples.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=Laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count.
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- QC NELAP ID's: PA 09-00131, NJ PA166, FL E87954, NY 11223, CT PH-0768, DE PA-018, KY 90228, MD 206, EPA PA00018. Bioassay: PA 09-03574, NJ PA034, FL E87953, KS E10373, SC 89020001.
- QC STATE ID's: Wind Gap, NJ PA001, PA 48-01334; E RUTHERFORD NJ02015; Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL is the EPA recommended "maximum contaminant level" for a parameter, PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.
- * - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit or MDL.

Thomas J. Hines
Thomas J. Hines, President

AW0789 Fitzgerald



QC Laboratories

1205 Industrial Blvd.

Phone: 215-355-3900

Southampton, PA 18966-0514

Fax: 215-355-7231

CHAIN OF CUSTODY

Page ____ of ____

Bill to/Report to: (if different)

Client/Acct. No. INTEV ENV. Group INCAddress 6907A EASTON RDCity/State/Zip Pipersville PA 18947Phone/Fax 215 766-7230 / 9730Client Contact DAW FITZGERALD

Sampling Site Address: (if different)

ROOSEVELT FIELD
GARDEN City N.Y

P.O. No.

QC Contact

Lab LIMS No:

L3504489

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

LAB USE ONLY:

____ Ascorbic/HCl Vials # 15 HCl Vials# ____ Na₂S₂O₃

____ Na OH/Zn acetate pH

____ HNO₃ pH# ____ H₂SO₄ pH

____ NaOH pH

____ Unpreserved

____ Hcl pH

____ Temp control

ANALYSIS REQUESTED

Field pH, Temp (C or F),
DO, Cl₂, S. Cond, etc.VOA¹⁰ DichlorodifluoromethanePH 6.845 1,2 Dichloroethene

LAB USE ONLY

PROJECT

Collection

G
R
A
BC
O
M
PMatrix
Code

Number of Containers

FIELD ID

Date

Military Time

Total

H₂O₄

HCl

Y₉SHNO₃

NaOH

ZnAc

Unpres

Bact

Temp

Control

ID#

Temp

Control

ID#

Temp

Control

ID#

Temp

Control

ID#

Temp

Control

ID#

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Control

ID#

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ID#

Temp

Control

ID#

SAMPLED BY: (Name/Company)

Verbal/fax data due: ____/____/____

Report Format: ☐ Standard ☐ Forms

Hardcopy due: ____/____/____

☒ Standard + QC ☐ NJ Reduced ☐ Disk

Field Parameters Analyzed By:

Sig:

Date/Time:

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY METHOD:	Custody Seal Number
1 <u>Joseph Kunkin</u>	<u>9/10/10</u>	<u>14:00</u>	1 <u>John G. Nulty</u>	<u>9/10/10</u>	<u>14:00</u>	<input type="checkbox"/> QC COURIER <input type="checkbox"/> CLIENT	
2 <u>John G. Nulty</u>	<u>9/10/10</u>	<u>19:00</u>	2 <u>John G. Nulty</u>	<u>9/10/10</u>	<u>19:00</u>	<input type="checkbox"/> UPS <input type="checkbox"/> FEDEX <input type="checkbox"/> OTHER	
3	DATE	TIME	3	DATE	TIME	COMMENTS:	
4	DATE	TIME	4	DATE	TIME		
5	DATE	TIME	5	DATE	TIME		

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Sep 09 2010, 03:53 pm



DAN FITZGERALD
INTEX INC.
6907A EASTON ROAD
PIPERSVILLE, PA 18947

Project No.: AW0789 FITZGERALD
Phone: (215) 766-7230
Fax: (215) 766-9730
Cell: () -

Primary Driver: JCN

Service Date: 09/10/10 PU AFTER 2:00 PM To 09/10/10

PICK-UP

Delivery Charge:

Day of Week: FRI

Sampling Instructions:

Contact: DAN

Bottle Prep:

Rush Samples:

Service to be performed at:

,

PLEASE SCHEDULE.... PICKUP... FOR FRIDAY 9/10/10 ...AFTER 2:00 PM.

Requested by: Robert F. Hulit Ext:
Entry date: 09/09/10 03:53PM

Call received: 09/09/10 03:52PM

Field Service Request No.: FS143325
Service Time: 10 minutes
Equip Code: PU

10/10/10

Appendix I

Certificates of Disposal, Bills of Lading, and Waste Manifests

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 631-553-5785	4. Waste Tracking Number 100002 10002
5. Generator's Name and Mailing Address U.S. EPA REGION II/OLD ROOSEVELT FIELD SITE 290 BROADWAY, NEW YORK, NY 10007-1816			Generator's Site Address (if different than mailing address) 251 CLINTON RD GARDEN CITY, NEW YORK		
Generator's Phone: 212-637-4106					
6. Transporter 1 Company Name FREEHOLD CARTAGE, INC.			U.S. EPA ID Number NJ0054126164		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address ENVIRONMENTAL RECOVERY CORP 1076 OLD MANHEIM PIKE, LANCASTER, PA 17601			U.S. EPA ID Number		
Facility's Phone: 717-393-2627			N/A		

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
1. NON HAZARDOUS, NON REGULATED (PURGE WATER)	1	TT	5000	G	NREG
2.			(43 *)	Y	
3.					
4.					

13. Special Handling Instructions and Additional Information

* MATERIAL OFFLOADED FOR PIT SOLIDIFICATION & CREATED (43) YARDS FOR DISPOSAL.

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
 Generator's/Officer's Printed/Typed Name: JOHN N. SCIGNERY Signature: [Signature] ON BEHALF OF EPA Month: 09 Day: 01 Year: 10

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name: ANTONIO TROCCATO Signature: [Signature] Month: 09 Day: 01 Year: 10
 Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy
 17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
 Manifest Reference Number:
 17b. Alternate Facility (or Generator) U.S. EPA ID Number:
 Facility's Phone:
 17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
 Printed/Typed: BRUCE ALEXIS Signature: [Signature] Month: 09 Day: 02 Year: 10

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number N/A		2. Page 1 of 1	3. Emergency Response Phone 631-553-5785		4. Waste Tracking Number 10001	
		5. Generator's Name and Mailing Address U.S. EPA REGION II/OLD ROOSEVELT FIELD SITE 290 BROADWAY, NEW YORK, NY 10007-1816 Generator's Phone: 212-637-4106				Generator's Site Address (if different than mailing address) 251 CLINTON RD GARDEN CITY, NY		
GENERATOR		6. Transporter 1 Company Name FREEHOLD CARTAGE, INC.						U.S. EPA ID Number NJD 054 126 164
		7. Transporter 2 Company Name						U.S. EPA ID Number
DESIGNATED FACILITY		8. Designated Facility Name and Site Address ENVIRONMENTAL RECOVERY CORP 1076 OLD MANHEIM PIKE, LANCASTER, PA 17601 Facility's Phone: 717-393 2627						U.S. EPA ID Number N/A
		9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
				No.	Type			
		1. NON HAZARDOUS, NON REGULATED (PURGE WATER)		1	TT	5000	G	NREG
		2.				(46 Y)		
		3.						
		4.						
TRANSPORTER		13. Special Handling Instructions and Additional Information * MATERIAL OFFLOADED FOR PIT SOLIDIFICATION & CREATED (46) YARDS FOR DISPOSAL.						
		14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.						
INTL		Generator's Officer's Printed/Typed Name Frank Robina		Signature [Signature]		Month Day Year 09/01/10		
		<input checked="" type="checkbox"/> International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:				
TRANSPORTER		15. Transporter Acknowledgment of Receipt of Materials		Transporter 1 Printed/Typed Name Ron Turcotte Jr		Signature [Signature]		
		Transporter 2 Printed/Typed Name C. Liff- [Signature]		Signature [Signature]		Month Day Year 9/2/10		
DESIGNATED FACILITY		17. Discrepancy						
		17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
DESIGNATED FACILITY		17b. Alternate Facility (or Generator)						U.S. EPA ID Number
		Facility's Phone:						
DESIGNATED FACILITY		17c. Signature of Alternate Facility (or Generator)						Month Day Year
DESIGNATED FACILITY		18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a						
		Printed/Typed Name BRUCE ALEXIS		Signature [Signature]		Month Day Year 09/02/10		

Shipper No. 1067

Carrier No. _____

Page 1 of 1

FREEHOLD CARTAGE INC

(Name of carrier)

(SCAC)

Date 9/16/10

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO:

Consignee ENVIRONMENTAL Recovery Corp

Street 1076 OLD MANHEIM PIKE

City LANCASTER State, PA Zip Code 17601

FROM:

Shipper U.S. EPA Region II / Roosevelt Field

Street CLINTON RD

City Gaithersburg City State NY Zip Code _____

24 hr. Emergency Contact Tel. No. 732-371-2939

Route

Vehicle
Number

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class or UN or NA Number, Proper Shipping Name, UN or NA Number, Packing Group Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
L T/T		NON HAZARDOUS, NON REGULATED (GROUND WATER)	5,200 GALS * (38 YDS)	SUBJECT TO WEIGHTS		
		# 10091				
		* MATERIAL WAS OFFLOADED FOR PIT SOLIDIFICATION & CREATED 38 YDS. FOR DISPOSAL.				
		REC'D @ ERC: [Signature] 9/17/00				

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said property over all or any portion of said route to des-

REMIT
C.O.D. TO:
ADDRESS**COD**

Amt: \$

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Contractor)

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES	
-----------------	--

FREIGHT PREPAID Check box if charges
except when box at are to be
right is checked ☐ collect

tionation and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER U.S. EPA Region II
ON BEHALF OF

PER

CARRIER

PER

DATE _____

Permanent post-office address of shipper.



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1

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on site (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <div style="text-align: center;">N/A</div>		Manifest Document No. <div style="text-align: center;">13022</div>	2. Page 1 of 1
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, 20th FL, NEW YORK, NY 10007-1866					
4. Generator's Phone (212) 637-4273					
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 732-462-10001	
9. Designated Facility Name and Site Address ENVIRONMENTAL RECOVERY CORP 1076 OLD MANHEIM PIKE# LANCASTER, PA 17601		10. US EPA ID Number N/A		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID 301344	
				F. Facility's Phone 717-393-2627	
11. WASTE DESCRIPTION			12. Containers	13. Total Quantity	14. Unit Wt./Vol.
a. NON HAZARDOUS NON REGULATED (PURGE WATER)			No. 1 Type TT	2228	G
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: STEWART AVE AND CLINTON RD GARDEN CITY, NY R-1167840me			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					

NON-HAZARDOUS WASTE

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
ON BEHALF OF US EPA REGION II					Date
Printed/Typed Name MIKE EHNDT		Signature <i>[Signature]</i>		Month 3 Day 12 Year 13	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name GARY WHITE		Signature <i>[Signature]</i>		Month 3 Day 12 Year 13	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted on item 19.					
Printed/Typed Name MEUVILLE DIXON		Signature <i>[Signature]</i>		Month 3 Day 12 Year 13	

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13021	2. Page 1 of 1
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, 20th FL, NEW YORK, NY 10007-1866					
4. Generator's Phone (212) 637-4273					
5. Transporter 1 Company Name FREEHOLD CARTAGE INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 732-462-1001	
				C. State Transporter's ID	
				D. Transporter 2 Phone	
9. Designated Facility Name and Site Address ENVIRONMENTAL RECOVERY CORP 1076 OLD MANHEIM PIKE, LANCASTER, PA 17601		10. US EPA ID Number N/A		E. State Facility's ID 301344	
				F. Facility's Phone 717-393-2627	
11. WASTE DESCRIPTION			12. Containers		14. Unit Wt./Vol.
			No.	Type	
a. NON HAZARDOUS NON REGULATED (PURGE WATER)			1	TT	2,883 G
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: STEWART AVE AND CLINTON RD GARDEN CITY, NY			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
<div style="border: 2px solid black; padding: 5px; margin: 10px auto; width: 80%;"> 16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations. </div>					
ON BEHALF OF US EPA REGION II				Date	
Printed/Typed Name MIKE EHNOT		Signature <i>[Signature]</i>		Month 3	Day 13
17. Transporter 1 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name Dan Wagner		Signature <i>[Signature]</i>		Month	Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name		Signature		Month	Day Year
19. Discrepancy Indication Space					
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name Brenda Weaver				Date 3/1/13	
Signature <i>[Signature]</i>					

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

ENVIRONMENTAL RECOVERY CORPORATION

NON-HAZARDOUS WASTE MANIFEST

Generators Name and Site Address USEPA Region II - Roosevelt Clinton Road Garden City, NY 11530		Manifest No. 100920	
		Generator Contact Ken Lippay	
		Generator Phone (732) 600-0993	
Transporter Company Name Environmental Recovery Corp.		US EPA ID Number PAD987266749	
Transporter Company Address 1076 Old Manheim Pike, Lancaster, PA 17601		Transporter Contact Scott Reisinger	
		Transporter Phone (717) 393-2627	
Designated Facility Name and Site Address Environmental Recovery Corporation 1076 Old Manheim Pike Lancaster, PA 17601		US EPA ID Number PAD987266749	
		State Facility's ID Number 301344	
		Facility's Phone (717) 393-2627	
WASTE DESCRIPTION		Containers	
		No.	Type
a. Non-Haz Groundwater Sediment/Sludge b. c. d.		XX	TT
Other Comments Work Order # RAG-3264		Total Quantity 1755	
		UOM	
TYPES OF CONTAINERS BA = Burlap, cloth, paper or plastic bags, super sac CF = Fiber or plastic boxes, cartons, cases, cubic yd. box CM = Metal boxes, cartons, cases (including roll-offs) CW = Wooden boxes, cartons, cases, pallet DF = Fiberboard or plastic drums, barrels, kegs DM = Metal drums, barrels, kegs, pails DT = Dump truck DW = Wooden drums, barrels, kegs TT = Cargo tanks (tank trucks) TP = Liqua bins / totes			
UNITS OF MEASURE (UOM) G = Gallons (liquids only) P = Pounds T = Tons (2000 pounds) Y = Cubic Yards			
I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.			
On behalf of EPA Region 2 Printed / Typed Name Joseph Coffer		Signature 	
		Date Month Day Year 3 18 13	
Transporter Acknowledgement of Receipt of Materials Printed / Typed Name THS 1202		Signature 	
		Date Month Day Year 3 18 13	
Discrepancy Indication Space 			
Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted above			
Printed / Typed Name 		Signature 	
		Date Month Day Year 3 18 13	

White Copy: Environmental Recovery Corp.

Yellow Copy: Invoice Copy

Pink Copy: Transporter

Gold Copy: Generator

**FREEHOLD CARTAGE INC.**

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010

(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164**S 227981**350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-16135533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS <i>US. Env. Region 4 Base</i> <i>251 Clinton R.D.</i> <i>Cordeiro, NY 11530</i>		PHONE <i>(631)</i> <i>852-4109</i>		APPOINTMENT TIME	
FCI REP. LOADING (PRINT) <i>B. Delmas</i>		PROCEDURE <i>Removal</i>	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT SHIPPER (MILITARY TIME ONLY) <i>08:15</i> <i>09:00</i>
COMMENTS OR DELAYS AT SHIPPER		EQUIPMENT USED			

BROKER		MANIFEST / DOCUMENT NO. <i>7374</i>									
PO#		WO#									
(#)	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM	
1	<i>Non Rec. Waste</i>				61	<i>7m</i>	<i>26</i>			5	
2	<i>Well Drilling</i>										
3											

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE <i>Frank Robinson</i>	SHIPPER'S SIGNATURE <i>X [Signature]</i> I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	DATE LOADED <i>07/05/10</i> MO. DAY YR.
--	--	---

CONSIGNEE NAME/ADDRESS <i>modern Landfill</i> <i>4000 Mt. Pleasant R.D.</i> <i>York PA 17402</i>		PHONE <i>(717)</i> <i>746-2676</i>		APPOINTMENT TIME	
FCI REP. UNLOADING (PRINT) <i>B. Delmas</i>		PROCEDURE <i>U/L</i>	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT CONSIGNEE (MILITARY TIME ONLY) <i>08:45</i> <i>09:00</i>
COMMENTS OR DELAYS AT CONSIGNEE		EQUIPMENT USED			

PLEASE PRINT NAME/TITLE	CONSIGNEE SIGNATURE <i>X [Signature]</i>	DATE UNLOADED <i>07/05/10</i> MO. DAY YR.
-------------------------	---	---

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 640943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 227981



REPUBLIC
SERVICES, INC.

04 73796

NON-HAZARDOUS WASTE MANIFEST

GENERATOR INFORMATION

Generator Name: US EPA REGION 11 / ROOSEVELT

Address: _____

City: MANHATTAN County: _____

State: NEW YORK Zip: _____

Site Location (if different): _____

CUSTOMER/BILLING INFORMATION

Billing Name: _____

Address: _____

City: _____ County: _____

State: _____ Zip: _____

Republic Services Approval Number	Description of Waste	Volume/Weight	Expiration Date	Container Type
73796	WASTE MATERIALS FROM ROOSEVELT	2000		WASTE TUBS

*Attach Additional Sheet if necessary.

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator/Authorized Agent Name: _____

Signature: _____

Date Shipped: _____

TRANSPORTER INFORMATION

Transporter Name: FREEMOLD CARTAGE INC DOT Number: 100373

Address: 615 HWY 33 East Truck Number: 7441 40-107-113

FREEMOLD 43 00726 Phone Number: (732) 482-1001

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

Name of Authorized Agent: _____

Signature: _____

Date Delivered: _____

DISPOSAL SITE INFORMATION

Site Name: Modern Landfill Phone Number: 717-246-2686

Address: 4400 Mt. Pisgah Road, York, PA 17402

I hereby acknowledge receipt of the above described materials.

Name (Print or Type): _____

Signature: _____

Date Received: _____

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5586



REPUBLIC
SERVICES, INC.

Ticket: 077698
Date: 07/09/10
Time In: 8:53 am
Time Out: 9:43 am

Customer Copy

Vehicle: 218704 ROLL OFF DEP#: 008892 WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#:

00 Gross Weight 64,100.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 29,040.00 lb

Net Weight 35,060.00 lb

LINCROFT, NJ 07738

Net Tons 17.53 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 04 73796/227981

Generator: USEPA REG-11

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	W-111 SW DRILLING MUD/SOILS	17.53	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

JODI WILLIAMS 059039

**FREEHOLD CARTAGE INC.**

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164

S 214554

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 772-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS U.S. EPA Region II SILVERDALE BARDON CITY, L.I. NY.		PHONE 051 852-4104 (AREA CODE)			
FCI REP. LOADING (PRINT) Bill		PROCEDURE RE	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT SHIPPER (MILITARY TIME ONLY) 11:00 - 11:30
COMMENTS OR DELAYS AT SHIPPER		EQUIPMENT USED			

BROKER:		MANIFEST/DOCUMENT NO. 75714								
PO#	WO#									
(#)	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	100% pure polypropylene									
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

Incident # 31192

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE Frank Robinson	SHIPPER'S SIGNATURE X [Signature] I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	DATE LOADED 11/20/92 MO DAY YR
--	--	---

CONSIGNEE NAME/ADDRESS Modern Landfill 4400 DISCARDS York PA.		PHONE 712 346-3686 (AREA CODE)			
FCI REP. UNLOADING (PRINT) Theresa H. Hatcher		PROCEDURE Discard	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT CONSIGNEE (MILITARY TIME ONLY) 11:00 - 11:30
COMMENTS OR DELAYS AT CONSIGNEE		EQUIPMENT USED			

PLEASE PRINT NAME/TITLE	CONSIGNEE SIGNATURE X [Signature]	DATE UNLOADED 11/20/92 MO DAY YR
-------------------------	---	---

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A-840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15539	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 214554



REPUBLIC
SERVICES, INC.

04 73797

NON-HAZARDOUS WASTE MANIFEST

GENERATOR INFORMATION

Generator Name: US EPA REGION 11

Address: 251 CLINTON RD

City: GARDEN CITY County: _____

State: NEW YORK Zip: _____

Site Location (if different): _____

Phone: (631) 832-4109

CUSTOMER/BILLING INFORMATION

Billing Name: _____

Address: _____

City: _____ County: _____

State: _____ Zip: _____

Republic Services Approval Number	Description of Waste	Volume/Weight	Expiration Date	Container Type
109107	NON HAZARDOUS / NON REGULATED SOIL			

*Attach Additional Sheet if necessary.

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator/Authorized Agent Name: [Signature] Signature: [Signature] Date Shipped: 7/10/10

TRANSPORTER INFORMATION

Transporter Name: FREEMAN CARTAGE INC DOT Number: 190713

Address: 305 HWY 31 EAST Truck Number: 652

FREEMAN NJ 07728 Phone Number: (732) 462 1001

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

Name of Authorized Agent: [Signature] Signature: [Signature] Date Delivered: _____

DISPOSAL SITE INFORMATION

Site Name: Modern Landfill Phone Number: 717-246-2686

Address: 4400 Mt. Pisgah Road, York, PA 17402

hereby acknowledge receipt of the above described materials.

Name (Print or Type): _____ Signature: [Signature] Date Received: 7/10/10

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



REPUBLIC
SERVICES, INC.

Ticket: 077672
Date: 07/09/10
Time In: 8:02 am
Time Out: 8:52 am

Scalehouse Copy

Vehicle: 121776 TRUCK-TRAILER DEP#: VIN WH 0754 FREEHOLD

Container/Trailer/DEP#: 380 002980 00 Gross Weight 62,460.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC Tare Weight 34,280.00 lb

716 NEWMAN SPRINGS ROAD, PMB 292 Net Weight 28,180.00 lb

LINCROFT, NJ 07738 Net Tons 14.09 TN

Reference: Contract/Profile: 3819109167 Yards 20.00 YD

Manifest: 04 73797/214554 Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	14.09	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

JODI WILLIAMS 059039

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



REPUBLIC
SERVICES, INC.

Ticket: 077672
Date: 07/09/10
Time In: 8:02 am
Time Out: 8:52 am

Customer Copy

Vehicle: 121776 TRUCK-TRAILER DEP#: VIN WH 0754 FREEHOLD

Container/Trailer/DEP#: 380 002980 00 Gross Weight 62,460.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC Tare Weight 34,280.00 lb

716 NEWMAN SPRINGS ROAD, PMB 292 Net Weight 28,180.00 lb

LINCROFT, NJ 07738 Net Tons 14.09 TN

Reference: Contract/Profile: 3819109167 Yards 20.00 YD

Manifest: 04 73797/214554 Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	14.09	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

JODI WILLIAMS 059039



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164

S 290591

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

152 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS ROOSEVELT MAIL GORDON CITY, N.Y. 1626		PHONE (AREA CODE) TRACTOR TRAILER		APPOINTMENT TIME	
FCI REP. LOADING (PRINT) AL	PROCEDURE R-10	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT SHIPPER (MILITARY TIME ONLY)	ARRIVAL TIME DEPARTURE TIME
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED	

BROKER		MANIFEST/DOCUMENT NO.									
FO#		WO									
(X)	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM	
1	NON-HAZ-SC-1	N/A					20	Y	N/A	5	
2											
3											

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.										
---	--	--	--	--	--	--	--	--	--	--

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

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PLEASE PRINT NAME/TITLE Frank Robinson	SHIPPER'S SIGNATURE X <i>Frank Robinson</i> I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	DATE LOADED 11/1/99 MO DAY YR
--	--	--

CONSIGNEE NAME/ADDRESS MODERN INDUSTRIES YORK, PA		PHONE (AREA CODE) TRACTOR TRAILER		APPOINTMENT TIME	
FCI REP. UNLOADING (PRINT) AL	PROCEDURE R-10	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT CONSIGNEE (MILITARY TIME ONLY)	ARRIVAL TIME DEPARTURE TIME
COMMENTS OR DELAYS AT CONSIGNEE				EQUIPMENT USED	

PLEASE PRINT NAME/TITLE Shorbin	CONSIGNEE SIGNATURE X <i>Shorbin</i>	DATE UNLOADED 11/1/99 MO DAY YR
---	--	--

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MT UPW-0190713-OH	15939	QUESEC, CANADA CC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 290591

Modern Landfill

4400 ML Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5580



REPUBLIC
SERVICES, INC.

Ticket: 078152
Date: 07/12/10
Time In: 10:11 am
Time Out: 10:43 am

Customer Copy

Vehicle: 218626 ROLL OFF DEP#: VIN# WH# 0754 FCI

Container/Trailer/DEP#:

00 Gross Weight 54,880.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMS 292

Tare Weight 28,260.00 lb

Net Weight 26,620.00 lb

LINCROFT, NJ 07738

Net Tons 13.31 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 071210-2/290591

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	13.31	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

MYRTLE CURTIN 061389



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-3924

BILL OF LADING
FCI EPA ID NO. NJD054126164

M 114775

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Barlow Mun. Airport
Barlow, FL 32030
Phone: (863) 533-4599
Fax: (863) 533-1613

5535 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 15512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29155
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS US EPA REGION II / ROOSEVELT 251 CLINTON RD. GARDEN CITY, N.Y.		PHONE AREA CODE TRACTOR TRAILER		APPOINTMENT TIME	
FCI REP. LOADING (PRINT) DAN C. HAINAN		PROCEDURE REMOVED	EQUIP. SPOTTED REMOVED	EQUIP. REMOVED REMOVED	TIME AT SHIPPER (MILITARY TIME ONLY) ARRIVAL TIME DEPARTURE TIME
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED	

BROKER:		MANIFEST/DOCUMENT NO.	
PO#:	WO#:		

QTY	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA UN NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	C-MANIFEST									
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE Frank Robinson	SHIPPER'S SIGNATURE X [Signature]	DATE LOADED 7/12/10 MO. DAY YR.
---	--------------------------------------	---------------------------------------

CONSIGNEE NAME/ADDRESS MODERN LANDFILL 4900 MT. DESHA RD YORK, PA.		PHONE AREA CODE TRACTOR TRAILER		APPOINTMENT TIME	
FCI REP. UNLOADING (PRINT) T. Sherbin		PROCEDURE Dump	EQUIP. SPOTTED REMOVED	EQUIP. REMOVED REMOVED	TIME AT CONSIGNEE (MILITARY TIME ONLY) ARRIVAL TIME DEPARTURE TIME

COMMENTS OR DELAYS AT CONSIGNEE		EQUIPMENT USED	
---------------------------------	--	----------------	--

PLEASE PRINT NAME/TITLE T. Sherbin	CONSIGNEE SIGNATURE X [Signature]	DATE UNLOADED 7/12/10 MO. DAY YR.
---------------------------------------	--------------------------------------	---

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-CPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-S35	

White - FCI Original Blue - FCI Office/Customer Gold - Retained by Generator
Yellow - FCI Billing Green - Retained by TSDF

M 114775

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2886
Fax (717) 244-5588



REPUBLIC
SERVICES, INC.

Ticket: 078048
Date: 07/12/10
Time In: 6:58 am
Time Out: 7:26 am

Scalehouse Copy

Vehicle: 218747 ROLL OFF DEP#: 008902

WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#:

03 Gross Weight 47,480.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 30,100.00 lb

Net Weight 17,380.00 lb

LINCROFT, NJ 07738

Net Tons 8.69 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 71210-1/114775

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	WW [11] SW-DRILLING MUD/SOILS	8.69	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

MYRTLE CURTIN 061389



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164

S 303741

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mtn. Airport
Bartow, FL 33830
Phone: (863) 533-4399
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS US EPA Region II		PHONE (652)		APPOINTMENT TIME 11:00 AM	
FCI REP. LOADING (PRINT) Bill		PROCEDURE S/O	EQUIP. SPOTTED 1	EQUIP. REMOVED 1	TIME AT SHIPPER 11:00 AM
COMMENTS OR DELAYS AT SHIPPER Doc # 30635		EQUIPMENT USED Line			

BROKER		MANIFEST / DOCUMENT NO.									
PO#	WG#										
(1)	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM	
1	NO10 H12 ALUM Reg						20.4			5	
2											
3											

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rates offered to the contractor.

PLEASE PRINT NAME/TITLE Frank Robinson	SHIPPER'S SIGNATURE X <i>Frank Robinson</i>	DATE LOADED 11/14/90
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		MO. DAY YR.

CONSIGNEE NAME/ADDRESS Modern Landfill		PHONE (652)		APPOINTMENT TIME 11:00 AM	
FCI REP. UNLOADING (PRINT) Bill		PROCEDURE Empty	EQUIP. SPOTTED 1	EQUIP. REMOVED 1	TIME AT CONSIGNEE 11:00 AM
COMMENTS OR DELAYS AT CONSIGNEE		EQUIPMENT USED			

PLEASE PRINT NAME/TITLE T. Shredine	CONSIGNEE SIGNATURE X <i>T. Shredine</i>	DATE UNLOADED 11/14/90
		MO. DAY YR.

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-SML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDP
Gold - Retained by Generator

S 303741

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 244-3606
Fax (717) 244-5588



Ticket: 078449
Date: 07/13/10
Time In: 9:59 am
Time Out: 10:26 am

Customer Copy

Vehicle: 218652 ROLL OFF DEP#: 008888

WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#:

03 Gross Weight 54,600.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 29,140.00 lb

Net Weight 25,460.00 lb

LINCROFT, NJ 07738

Net Tons 12.73 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 071310-3/303741

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	12.73	IN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

MYRTLE CURTIN 061389

FREEHOLD CARTAGE INC.

Date 7/4/02

Page _____ of _____

பெயர்: _____

; SC10]

On Collect on Delivery shipments, the sender's "GGR" must appear below consignee's name or as otherwise provided in Item #30, Sec. 1.

TO: **MODERN LANDFILL**
Consignee **4400 MT PISGAH RD**

Street

City **YORK** State, **PA** Zip Code

FROM: US EPA REGION II/ROOSEVELT
Shipper 251 CLINTON RD

Street

City **GARDEN CITY** State **NY** Zip Code

24 hr. Emergency Contact Tel. No. **631-852-4109**

Vehicle
Number[illegible]PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per: _____

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a value declaration by the shipper and the shipper does not so declare, the carrier releases the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NIMFC item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing shall be so indicated on the bill of lading, and transportation. See Section 3(a) of the Contract Terms and Conditions of the Bill of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled in accordance and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

REMIT
C.O.D. TO:
ADDRESS

COD

.. Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☒ \$

TOTAL CHARGES	\$
----------------------	-----------

FREIGHT CHARGES

FREIGHT PREPAID
except when box at
right is checked

Check box if charges
are to be
collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to des-

ination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

~~SHIPPER~~ **USEPA REGION II**
~~ON BEHALF OF US EPA~~

PER Paul A. [Signature]

CARRIER: FREEHOLD CARTAGE INC.

PER 2008

DATE 3-5-78

3

Permanent post-office address of shipper.



PRINTED ON RECYCLED PAPER
USING SOYBEAN INK



PRINTED WITH
JOY INK

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FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO: NJD054126164

S 211539

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS <i>Waste Region II, Inc.</i>		PHONE <i>607</i>			
(AREA CODE)		TRACTOR		TRAILER	
APPOINTMENT TIME		TIME AT SHIPPER		(MILITARY TIME ONLY)	
ARRIVAL TIME		DEPARTURE TIME			
FCL REP. LOADING (PRINT)		PROCEDURE		EQUIP. SPOTTED	
EQUIP. REMOVED		TIME AT SHIPPER		(MILITARY TIME ONLY)	
COMMENTS OR DELAYS AT SHIPPER		EQUIPMENT USED			

BROKER		MANIFEST/DOCUMENT NO.	
PO#	WO#		
(X)	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.
1	<i>Non Haz Non Reg</i>		
2	<i>(Soil)</i>		
3			

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.	
<i>NDP 31242</i>	
SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.	
Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.	
PLEASE PRINT NAME/TITLE	SHIPPER'S SIGNATURE
<i>Frank Boni</i>	<i>Frank Boni</i>
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	
DATE LOADED	MO. DAY YR.
<i>7/10/91</i>	<i>7 10 91</i>

CONSIGNEE NAME/ADDRESS <i>Modern Landfill</i>		PHONE			
(AREA CODE)		TRACTOR		TRAILER	
APPOINTMENT TIME		TIME AT CONSIGNEE		(MILITARY TIME ONLY)	
ARRIVAL TIME		DEPARTURE TIME			
FCL REP. UNLOADING (PRINT)		PROCEDURE		EQUIP. SPOTTED	
EQUIP. REMOVED		TIME AT CONSIGNEE		(MILITARY TIME ONLY)	
COMMENTS OR DELAYS AT CONSIGNEE		EQUIPMENT USED			
PLEASE PRINT NAME/TITLE		CONSIGNEE SIGNATURE		DATE UNLOADED	
<i>T. Sherbino</i>		<i>T. Sherbino</i>		<i>7/10/91</i>	
				MO. DAY YR.	

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0057	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-GML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 211539

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 078373
Date: 07/13/10
Time In: 6:53 am
Time Out: 8:08 am

Customer Copy

Vehicle: 218747 ROLL OFF DEP#: 008902

WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#:

.00 Gross Weight 50,140.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 29,120.00 lb
Net Weight 21,020.00 lb

LINCROFT, NJ 07738

Net Tons 10.51 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 071310-1/211539

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] - SW-DRILLING MUD/SOILS	10.51	TN		

Check #

Net Amount:

Tendered:

Change:

Driver _____

Weighmaster _____

MYRTLE CURTIN 061389

Date 5/19/00

(SCAD)

FROM: US EPA REGION II/ROOSEVELT
Shipper

251 CLINTON RD

ਉਦਾਹਰਣ

City **GARDEN CITY** State **NY** Zip Code

City **YORK** State, **PA** Zip Code

24 hr. Emergency Contact Tel. No. 631 852 4109

Vehicle
Number

DATE:

REMIT
G.O.B. TO:
ADDRESS

Am. S.

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES	
FREIGHT PREPAID except when box at night is checked	<input type="checkbox"/> Check box if charges are to be collect

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/clearheaded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

RECEIVED, subject to the classifications and perils in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and described as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to de-

tion and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

CARRIER FREEHOLD CARTAGE INC.

PER

PER

DATE _____



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164

Q

114 Schoolground Rd.
Branford, CT 06405
Phone: (203) 483-5964
Fax: (203) 483-5984

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

40 Boulevard St.
Sumter, SC 29150
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS <i>FCI</i>		PHONE (AREA CODE) 732		TRAILER 44		APPOINTMENT TIME :			
FCI REP. LOADING (PRINT) <i>Thomas Hazen</i>		PROCEDURE <i>Removal</i>		EQUIP. SPOTTED		EQUIP. REMOVED		TIME AT SHIPPER (MILITARY TIME ONLY) :	
COMMENTS OR DELAYS AT SHIPPER						ARRIVAL TIME :		DEPARTURE TIME :	
						EQUIPMENT USED			

BROKER		MANIFEST / DOCUMENT NO.								
PO#		WO#								
(X) HM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	<i>From Shipper's Office</i>									
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER:

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE <i>Paul P...</i>	SHIPPER'S SIGNATURE X <i>[Signature]</i>	DATE LOADED 7/1/15 MO DAY YR.
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		

CONSIGNEE NAME/ADDRESS <i>Waste</i>		PHONE (AREA CODE)		TRAILER		APPOINTMENT TIME :			
FCI REP. UNLOADING (PRINT) <i>Waste</i>		PROCEDURE <i>Waste</i>		EQUIP. SPOTTED		EQUIP. REMOVED		TIME AT CONSIGNEE (MILITARY TIME ONLY) :	
COMMENTS OR DELAYS AT CONSIGNEE						ARRIVAL TIME :		DEPARTURE TIME :	
						EQUIPMENT USED			

PLEASE PRINT NAME/TITLE	CONSIGNEE SIGNATURE X <i>[Signature]</i>	DATE UNLOADED 7/1/15 MO DAY YR.
-------------------------	---	---------------------------------------

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF

Q

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 078425
Date: 07/13/10
Time In: 7:48 am
Time Out: 9:27 am

Scalehouse Copy

Vehicle: 121776 TRUCK-TRAILER DEP#: VIN WH 0754 FREEHOLD

Container/Trailer/DEP#: 307 00 Gross Weight 60,960.00 lb
Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC Tare Weight 34,720.00 lb
716 NEWMAN SPRINGS ROAD, PMB 292 Net Weight 26,240.00 lb

LINCROFT, NJ 07738

Net Tons 13.12 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 071310-2/74437

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	13.12	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

MYRTLE CURTIN 061389

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 078425
Date: 07/13/10
Time In: 7:48 am
Time Out: 9:27 am

Customer Copy

Vehicle: 121776 TRUCK-TRAILER DEP#: VIN WH 0754 FREEHOLD

Container/Trailer/DEP#: 307 00 Gross Weight 60,960.00 lb
Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC Tare Weight 34,720.00 lb
716 NEWMAN SPRINGS ROAD, PMB 292 Net Weight 26,240.00 lb

LINCROFT, NJ 07738

Net Tons 13.12 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 071310-2/74437

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	13.12	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

MYRTLE CURTIN 061389

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 081969
Date: 07/27/10
Time In: 11:14 am
Time Out: 12:20 pm

Scalehouse Copy

Vehicle: 218785 TRUCK-TRAILER DEP#: VIN# WH#0754 FCI
Container/Trailer/DEP#: 360 002980 00 Gross Weight 69,040.00 lb
Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC Tare Weight 33,620.00 lb
716 NEWMAN SPRINGS ROAD, PMB 292 Net Weight 35,420.00 lb
LINCROFT, NJ 07738 Net Tons 17.71 TN
Reference: Contract/Profile: 3819109167 Yards 20.00 YD
Manifest: 72610/223370 Generator: USEPA REG II
Origin: Materials & Services Quantity Unit Rate Disposal
NEW YORK STATE (NY) VV [11] SW-DRILLING MUD/SOILS 17.71 TN

Check #
Net Amount:
Tendered:
Change:

Driver: _____

Weighmaster: _____

JODI WILLIAMS 059039

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 081969
Date: 07/27/10
Time In: 11:14 am
Time Out: 12:20 pm

Customer Copy

Vehicle: 218785 TRUCK-TRAILER DEP#: VIN# WH#0754 FCI
Container/Trailer/DEP#: 360 002980 00 Gross Weight 69,040.00 lb
Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC Tare Weight 33,620.00 lb
716 NEWMAN SPRINGS ROAD, PMB 292 Net Weight 35,420.00 lb
LINCROFT, NJ 07738 Net Tons 17.71 TN
Reference: Contract/Profile: 3819109167 Yards 20.00 YD
Manifest: 72610/223370 Generator: USEPA REG II
Origin: Materials & Services Quantity Unit Rate Disposal
NEW YORK STATE (NY) VV [11] SW-DRILLING MUD/SOILS 17.71 TN

Check #
Net Amount:
Tendered:
Change:

Driver: _____

Weighmaster: _____

JODI WILLIAMS 059039



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126

S 223370

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS <i>U.S. Army # Roosevelt 251 Clinton Rd Garden City, NY</i>		PHONE (AREA CODE) 784		TRAILER		APPOINTMENT TIME :			
FCI REP. LOADING (PRINT) <i>B. Daldos</i>		PROCEDURE <i>8/0</i>		EQUIP. SPOTTED <i>9607</i>		EQUIP. REMOVED <i>9717</i>		TIME AT SHIPPER (MILITARY TIME ONLY) <i>07:45</i>	
COMMENTS OR DELAYS AT SHIPPER						ARRIVAL TIME		DEPARTURE TIME	
						EQUIPMENT USED <i>12 incher 5 Bows</i>			

BROKER		MANIFEST / DOCUMENT NO.							
PO#		WO# <i>787740</i>							
(X) HM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/IJN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.
1	<i>Non Reg Non HAZ</i>				<i>01</i>	<i>9/m</i>	<i>20</i>		
2	<i>well Drilling</i>								
3									

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.
15939 DEC-1# 35612

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transp named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE <i>Frank Rubin</i>	SHIPPER'S SIGNATURE <i>X [Signature]</i>	DATE LOADED <i>07/26/11</i>
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		MO DAY Y

CONSIGNEE NAME/ADDRESS <i>Modern Landfill</i>		PHONE (AREA CODE) 767		TRAILER <i>365</i>		APPOINTMENT TIME :			
FCI REP. UNLOADING (PRINT) <i>Sean K. Voke</i>		PROCEDURE <i>2 imp</i>		EQUIP. SPOTTED <i>9717</i>		EQUIP. REMOVED		TIME AT CONSIGNEE (MILITARY TIME ONLY)	
COMMENTS OR DELAYS AT CONSIGNEE						ARRIVAL TIME		DEPARTURE TIME	
						EQUIPMENT USED			

PLEASE PRINT NAME/TITLE <i>[Signature]</i>	CONSIGNEE SIGNATURE <i>X [Signature]</i>	DATE UNLOADED <i>7/27/11</i>
		MO DAY Y

**FREEHOLD CARTAGE INC.**P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924**BILL OF LADING**
FCI EPA ID NO. NJD054126164

S 30367

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (813) 533-4549
Fax: (813) 533-16135333 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367152 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 775-2611
Fax: (803) 775-2942

SHIPPER NAME/ADDRESS <i>Roosevelt Pallet</i> <i>Roanoke City, VA</i>		PHONE (AREA CODE) TRACTOR <i>875</i>		TRAILER		APPOINTMENT TIME	
FCI REP. LOADING (PRINT) <i>Angie C</i>	PROCEDURE <i>S/O</i>	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT SHIPPER	MILITARY TIME ONLY		
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED <i>Line Trip 5000</i>			

BROKER		MANIFEST/DOCUMENT NO.	
--------	--	-----------------------	--

QTY	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/IN/NO	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	<i>Non-Hg Material</i>	<i>9/1</i>	<i>9/1</i>	<i>9/1</i>	<i>1</i>	<i>40</i>	<i>70</i>	<i>4</i>	<i>9/1</i>	<i>5</i>
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER. <i>5000</i>										
--	--	--	--	--	--	--	--	--	--	--

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE <i>Frank Robinson</i>	SHIPPER'S SIGNATURE <i>[Signature]</i> X	DATE LOADED <i>1/1/00</i>
--	--	------------------------------

CONSIGNEE NAME/ADDRESS <i>Roanoke LIF</i> <i>Roanoke, VA</i>		PHONE (AREA CODE) TRACTOR <i>875</i>		TRAILER		APPOINTMENT TIME	
FCI REP. UNLOADING (PRINT) <i>Chris Sommers</i>	PROCEDURE <i>Unload</i>	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT CONSIGNEE	MILITARY TIME ONLY		
COMMENTS OR DELAYS AT CONSIGNEE				EQUIPMENT USED <i>Roll-off</i>			
PLEASE PRINT NAME/TITLE	CONSIGNEE SIGNATURE <i>[Signature]</i> X		DATE UNLOADED <i>1/1/00</i>				

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15932	QUEBEC, CANADA GC-6ML-047	
MA MA-294	MIN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSD
Gold - Retained by Generator

S 303676

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 244-2636
Fax (717) 244-5588



Ticket: 081967
Date: 07/27/10
Time In: 11:18 am
Time Out: 12:19 pm

Scalehouse Copy

Vehicle: 218820 TRUCK-TRAILER DEP#:

WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#: 402

00 Gross Weight 73,400.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC

Tare Weight 35,280.00 lb

716 NEWMAN SPRINGS ROAD, PMS 292

Net Weight 38,120.00 lb

LINCROFT, NJ 07738

Net Tons 19.06 TN

Reference:

Contract/Profile: 3819109167

Yards 0.00 YD

Manifest: 72610-2/303678

Generator: USEPA REG II

Origin	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	WV [11] SW-DRILLING MUD/SOILS	19.06	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster: _____

MYRTLE CURTIN 061388

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 244-2636
Fax (717) 244-5588



Ticket: 081967
Date: 07/27/10
Time In: 11:18 am
Time Out: 12:19 pm

Customer Copy

Vehicle: 218820 TRUCK-TRAILER DEP#:

WH#0754 FREEHOLD CARTAGE INC.

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Reference:

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Generator: USEPA REG II

Origin	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	WV [11] SW-DRILLING MUD/SOILS	19.06	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster: _____

MYRTLE CURTIN 061388

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Carrier No. _____

FREEHOLD CARTAGE INC.

(Name of carrier)

{ SCAC}

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO: **MODERN LANDFILL**
Consignee: **4400 MT PISGAH RD**
Street:
City: **YORK** State: **PA** Zip Code

FROM: US EPA REGION II/ROOSEVELT
Shirley

Street 251 CLINTON RD

City **GARDEN CITY** State **NY** Zip Code

24 hr. Emergency Contact Tel. No. 631-852-4109

Vehicle
NumberPLACARDS TENDERED: YES ☐ NO ☐

REMIT
C.O.D. TO
ADDRESS

COD

Amt \$

G.O.D. FREE
PREPAID ☐
COLLECT ☐ \$

TOTAL CHARGES - 27

FREIGHT CHARGES

FRIGHT PREPAID Check box if charges
except when buyer
is to pay freight

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent any other indication, the carrier shall, by the above and the above does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 250, Bill of Lading, Freight Bill, and Statements of Charges and Section 1(e) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

Signature of Consignor

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in material and order, to be as noted foregoing and delivery of the contents of packages inlabeled, marked, numbered and described as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of and on any of, said property over any or any portion of said route to be

tion and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in this governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the facing terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

~~USEPA REGION II~~
~~ON BEHALF OF USEPA~~

PER Frank R. L...

CARRIER FREEHOLD CARTAGE INC.

PER *[Signature]*

DATE 7/1/71



NO
Blue

FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164

M 114841

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33630
Phone: (803) 533-4599
Fax: (863) 533-1613

5535 Dunham Road
Maple Heights, OH 44137
Phone: (330) 833-2173
Fax: (330) 833-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS EPA. ROOSEVELT MAIL GARDEN CITY NY		PHONE (AREA CODE) TRACTOR 777 TRAILER 4461		APPOINTMENT TIME :	
FCI REP. LOADING (PRINT) MARC SNYDER	PROCEDURE Removal	EQUIP. SPOTTED	EQUIP. REMOVED 0901	TIME AT SHIPPER 12:00	(MILITARY TIME ONLY) 02:30
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED	

BROKER:		MANIFEST / DOCUMENT NO.									
PO#		WO# 787441									
(X) YES	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM	
1					1	91	20	9			
2											
3											

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE Frank Robinson	SHIPPER'S SIGNATURE X [Signature] I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	DATE LOADED 7/12/10 MO. DAY YR.
--	--	--

CONSIGNEE NAME/ADDRESS modern L/K York Pa. 17406		PHONE (AREA CODE) TRACTOR 797 TRAILER 4501		APPOINTMENT TIME :	
FCI REP. UNLOADING (PRINT) Bob Smith	PROCEDURE	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT CONSIGNEE 09:45	(MILITARY TIME ONLY) 10:45
COMMENTS OR DELAYS AT CONSIGNEE				EQUIPMENT USED	

PLEASE PRINT NAME/TITLE McCurdin	CONSIGNEE SIGNATURE X [Signature]	DATE UNLOADED 7/12/10 MO. DAY YR.
--	---	--

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDP
Gold - Retained by Generator

M 114841

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 081579
Date: 07/26/10
Time In: 9:54 am
Time Out: 10:39 am

Scalehouse Copy

Vehicle: 218797 TRUCK-TRAILER DEP#:

WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#: 4501

00 Gross Weight 59,300.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 35,020.00 lb

Net Weight 24,280.00 lb

LINCROFT, NJ 07738

Net Tons 12.14 TN

Yards 0.00 YD

Reference:

Contract/Profile: 3819109167

Manifest: M114841/1

Generator: USEPA REG II

Origin:

Materials & Services

Quantity

Unit

Rate

Disposal

NEW YORK STATE (NY)

WV [11]

SW-DRILLING MUD/SOILS

12.14

TN

Check #
Net Amount:
Tendered:
Change:

Driver

Weighmaster

MYRTLE CURTIN 061389

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 081579
Date: 07/26/10
Time In: 9:54 am
Time Out: 10:39 am

Customer Copy

Vehicle: 218797 TRUCK-TRAILER DEP#:

WH#0754 FREEHOLD CARTAGE INC.

Container/Trailer/DEP#: 4501

00 Gross Weight 59,300.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 35,020.00 lb

Net Weight 24,280.00 lb

LINCROFT, NJ 07738

Net Tons 12.14 TN

Yards 0.00 YD

Reference:

Contract/Profile: 3819109167

Manifest: M114841/1

Generator: USEPA REG II

Origin:

Materials & Services

Quantity

Unit

Rate

Disposal

NEW YORK STATE (NY)

WV [11]

SW-DRILLING MUD/SOILS

12.14

TN

Check #
Net Amount:
Tendered:
Change:

Driver

Weighmaster

MYRTLE CURTIN 061389



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924

BILL OF LADING
FCI EPA ID NO. NJD054126164

S 283608

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229

175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-1613

5533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732

108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367

132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS U.S. EPA Region II 251 Clinton Rd Bartow, FL 33830		PHONE (AREA CODE) 652		APPOINTMENT TIME :	
FCI REP. LOADING (PRINT) Bill	PROCEDURE RE	EQUIP. SPOTTED	EQUIP. REMOVED 9717	TIME AT SHIPPER 07:10	(MILITARY TIME ONLY) 08:00
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED	

BROKER:		MANIFEST / DOCUMENT NO. 09-09202									
PO#		WO# 792545									
(X) MM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM	
1	HAZARDOUS MATERIAL						209				
2											
3											

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER										
--	--	--	--	--	--	--	--	--	--	--

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

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PLEASE PRINT NAME/TITLE Frank Robinson	SHIPPER'S SIGNATURE X [Signature] I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.	DATE LOADED 8/12/10 MO. DAY YR.
---	---	---------------------------------------

CONSIGNEE NAME/ADDRESS Modern Landfill		PHONE (AREA CODE) 6076		APPOINTMENT TIME :	
FCI REP. UNLOADING (PRINT) AL	PROCEDURE R/O	EQUIP. SPOTTED	EQUIP. REMOVED 9717	TIME AT CONSIGNEE 10:30	(MILITARY TIME ONLY) :
COMMENTS OR DELAYS AT CONSIGNEE				EQUIPMENT USED	

PLEASE PRINT NAME/TITLE [Signature]	CONSIGNEE SIGNATURE X [Signature]	DATE UNLOADED 8/12/10 MO. DAY YR.
--	--------------------------------------	---

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customs
Green - Retained by TSDF
Gold - Retained by Generator

S 283608

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



REPUBLIC
SERVICES, INC.

Ticket: 087954
Date: 08/20/10
Time In: 10:30 am
Time Out: 11:00 am

Scalehouse Copy

Vehicle: 218626 ROLL OFF DEP#: VIN# WH# 0754 FCI

Container/Trailer/DEP#:

00 Gross Weight 35,200.00 lb

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

Tare Weight 28,460.00 lb

Net Weight 6,740.00 lb

LINCROFT, NJ 07738

Net Tons 3.37 TN

Reference: Contract/Profile: 3819109167

Yards 40.00 YD

Manifest: 09-099202/283608

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV111 SW-DRILLING MUD/SOILS	3.37	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

TERRY SHERBINE 062688

Modern Landfill
4400 Mt. Pisgah Rd.
York, PA 17406
717-246-2686

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

09-09202

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number N/A		b. Manifest Document Number 09202		c. Page 1 of 1	
d. Generator's Name and Location: U.S. EPA REGION II/ROOSEVELT FIELD SITE 251 OLIVION RD, GARDEN CITY, NY f. Phone: 631-553-5785			e. Generator's Mailing Address: 290 BROADWAY, 22nd FLOOR NEW YORK, NY 10007-1866 g. Phone: 212-637-4106		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	n. Total Quantity	o. Unit Wt/Vol
109167	6/11	SOIL NON HAZARDOUS NON REGULATED	XX1	7 <i>(EST)</i>	T
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Frank Robinson		q. Signature <i>Frank Robinson</i>		r. Date 8/12/10	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: FREEHOLD CARTAGE, INC. 825 ROUTE 33, FREEHOLD, NJ 07728 b. Phone: 732-462-1001		
c. Driver Name (Print) Bill Burns	d. Signature <i>Bill Burns</i>	e. Date 8/12/10

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: MODERN LANDFILL 4400 MT PISGAH RD, YORK, PA 17402 b. Phone: 717-246-4635	c. US EPA Number NA	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.		
e. Name of Authorized Agent (Print)	f. Signature <i>[Signature]</i>	g. Date 8/12/10

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:
e. Special Handling Instructions and Additional Information:	
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable	
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.	
g. Operator's Name and Title (Print)	i. Date
Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both	

**FREEHOLD CARTAGE INC.**P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924**BILL OF LADING**
FCI EPA ID NO. NJD054126164

S 304232

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-16135533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS CEFO CHANDLER CITY NY		PHONE 631 583 5785 (AREA CODE)			
TRACTOR 765		TRAILER 360		APPOINTMENT TIME 11/12	
FCI REP. LOADING (PRINT) SEAN H. BOON	PROCEDURE Pick-up	EQUIP. SPOTTED	EQUIP. REMOVED 0135	TIME AT SHIPPER 14:00	(MILITARY TIME ONLY) 14:25
COMMENTS OR DELAYS AT SHIPPER C9-09007				EQUIPMENT USED	

BROKER		MANIFEST / DOCUMENT NO.	
PO#	WO#		

(X) PK	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	HAZARDOUS WASTE	H+2								
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

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PLEASE PRINT NAME/TITLE Frank E. Boon	SHIPPER'S SIGNATURE X [Signature]	DATE LOADED 8/12/15 MO. DAY YR.
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		

CONSIGNEE NAME/ADDRESS Modern Landfill 4400 AT PIGEON -101LK PA 11402		PHONE (AREA CODE)			
TRACTOR 787		TRAILER 341		APPOINTMENT TIME	
FCI REP. UNLOADING (PRINT) John Remond	PROCEDURE Dump	EQUIP. SPOTTED	EQUIP. REMOVED	TIME AT CONSIGNEE 8:00	(MILITARY TIME ONLY) 9:15
COMMENTS OR DELAYS AT CONSIGNEE				EQUIPMENT USED	

PLEASE PRINT NAME/TITLE militia	CONSIGNEE SIGNATURE X [Signature]	DATE UNLOADED 8/13/15 MO. DAY YR.
------------------------------------	--------------------------------------	---

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 304232

Modern Landfill
4400 Mt. Pisgah Rd.
York, PA 17406
717-246-2686

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

09-09203

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number: N/A		b. Manifest Document Number: 09203		c. Page 1 of 1	
d. Generator's Name and Location: U.S. EPA REGION II/ROOSEVELT FIELD SITE 251 CLINTON RD, GARDEN CITY, NY			e. Generator's Mailing Address: 290 BROADWAY, 22nd FLOOR NEW YORK, NY 10007-1866		
f. Phone: 631-553-5785			g. Phone: 212-637-4106		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	n. Total Quantity	o. Unit Wt/Vol
109167	6/11	SOIL NON-HAZARDOUS NON-REGULATED	XX1 BT	BT	T
	792576				
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Frank Robinson		q. Signature Frank Robinson		r. Date 8/12/10	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: FREEHOLD CARTAGE, INC. 825 ROUTE 33, FREEHOLD, NJ 07723		
b. Phone: 732-462-1001		
c. Driver Name (Print) SEAN BRAS	d. Signature Sean Bras	e. Date 8-12-10

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: MODERN LANDFILL 4400 MT PISGAH RD, YORK, PA 17402		c. US EPA Number	d. Discrepancy Indication Space:
b. Phone: 717-246-4635			
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print)	f. Signature me	g. Date 8/20/10	

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:		c. Responsible Agency Name and Address:	
b. Phone:		d. Phone:	
e. Special Handling Instructions and Additional Information:			
f. <input type="checkbox"/> Friable <input type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable			
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.			
g. Operator's Name and Title (Print)		h. Signature	
		i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both			

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



REPUBLIC
SERVICES, INC.

Ticket: 087896
Date: 08/20/10
Time In: 7:54 am
Time Out: 9:01 am

Scalehouse Copy

Vehicle: 12178 ROLL OFF DEP#: VIN# WH#1536

Container/Trailer/DEP#:

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

00 Gross Weight 59,740.00 lb
Tare Weight 33,780.00 lb
Net Weight 25,960.00 lb

LINCROFT, NJ 07738

Net Tons 12.98 TN

Reference:

Contract/Profile: 3819109167

Yards 20.00 YD

Manifest: 09-09203/304232

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VW [11] SW-DRILLING MUD/SOILS	12.98	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

TERRY SHERBINE 062688

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



REPUBLIC
SERVICES, INC.

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Net Tons 12.98 TN

Reference:

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Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VW [11] SW-DRILLING MUD/SOILS	12.98	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

TERRY SHERBINE 062688

**FREEHOLD CARTAGE INC.**P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924**BILL OF LADING**
FCI EPA ID NO. NJD054126164

S 258858

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-16135533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS U.S. EPA Region II 2000 North 2nd St 2500 Kilduff Rd Freehold, NJ 07728		PHONE (AREA CODE) TRACTOR 639		APPOINTMENT TIME :	
FCI REP. LOADING (PRINT) John Romanick	PROCEDURE S/O	EQUIP. SPOTTED 9747	EQUIP. REMOVED 11	TIME AT SHIPPER :	(MILITARY TIME ONLY) :
COMMENTS OR DELAYS AT SHIPPER				ARRIVAL TIME :	DEPARTURE TIME :
EQUIPMENT USED 1 Lumber					

BROKER:

PO#:

WO#:

MANIFEST / DOCUMENT NO.

(K) HM	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	See Manifest for Reg No. H92				1	CH	20	X		
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE John Romanick	SHIPPER'S SIGNATURE X [Signature]	DATE LOADED 8/1/11
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT.		MO. DAY YR.

CONSIGNEE NAME/ADDRESS 2400 Mt Pleasant Rd 2400 Mt Pleasant Rd		PHONE (AREA CODE) TRACTOR 787		APPOINTMENT TIME :	
FCI REP. UNLOADING (PRINT) John Romanick	PROCEDURE DUP	EQUIP. SPOTTED 9442	EQUIP. REMOVED	TIME AT CONSIGNEE 6:30	(MILITARY TIME ONLY) 7:30
COMMENTS OR DELAYS AT CONSIGNEE				ARRIVAL TIME :	DEPARTURE TIME :
EQUIPMENT USED					

PLEASE PRINT NAME/TITLE John Romanick	CONSIGNEE SIGNATURE X [Signature]	DATE UNLOADED 8/1/11
		MO. DAY YR.

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 258858

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 089544
Date: 08/27/10
Time In: 6:36 am
Time Out: 7:37 am

Scalehouse Copy

Vehicle: 12178 ROLL OFF DEP#: VIN# WH#1536

Container/Trailer/DEP#:

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

00 Gross Weight 68,980.00 lb
Tare Weight 34,200.00 lb
Net Weight 34,780.00 lb

LINCROFT, NJ 07738

Net Tons 17.39 TN

Reference: TR 341

Contract/Profile: 3819109167

Yards 40.00 YD

Manifest: 09-09205/258866

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	17.39	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

TERRY SHERBINE 062688

Modern Landfill

4400 Mt. Pisgah Rd.
York, PA 17406
(717) 246-2686
Fax (717) 244-5588



Ticket: 089544
Date: 08/27/10
Time In: 6:36 am
Time Out: 7:37 am

Customer Copy

Vehicle: 12178 ROLL OFF DEP#: VIN# WH#1536

Container/Trailer/DEP#:

Customer: 000826 SEACOAST ENVIRONMENTAL SERVICES INC
716 NEWMAN SPRINGS ROAD, PMB 292

00 Gross Weight 68,980.00 lb
Tare Weight 34,200.00 lb
Net Weight 34,780.00 lb

LINCROFT, NJ 07738

Net Tons 17.39 TN

Reference: TR 341

Contract/Profile: 3819109167

Yards 40.00 YD

Manifest: 09-09205/258866

Generator: USEPA REG II

Origin:	Materials & Services	Quantity	Unit	Rate	Disposal
NEW YORK STATE (NY)	VV [11] SW-DRILLING MUD/SOILS	17.39	TN		

Check #
Net Amount:
Tendered:
Change:

Driver _____

Weighmaster _____

TERRY SHERBINE 062688

Modern Landfill
4400 Mt. Pisgah Rd.
York, PA 17406
717-246-2686

If waste is asbestos waste, complete Sections I, II, III and IV
If waste is **NOT** asbestos waste, complete Sections I, II and III

09-09205

I. GENERATOR (Generator completes Ia-r)

a. Generator's US EPA ID Number N/A		b. Manifest Document Number 09205		c. Page 1 of 1	
d. Generator's Name and Location: U.S. EPA REGION II/OLD ROOSEVELT FIELD SITE 251 CLINTON RD. GARDEN CITY, NY			e. Generator's Mailing Address: 290 BROADWAY, 22nd FLOOR NEW YORK, NY 10007-1856		
f. Phone: 631-557-5785			g. Phone: 212-637-4106		
If owner of the generating facility differs from the generator, provide:					
h. Owner's Name:			i. Owner's Phone No.:		
j. Waste Profile #	k. Exp. Date	l. Waste Shipping Name and Description	m. Containers No.	Type	n. Total Quantity
109167	6/11	SOIL NON HAZARDOUS NON REGULATED	1	CM7 BT	EST 21
GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if this waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions. I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR 268 and is no longer a hazardous waste as defined by 40 CFR 261.					
p. Generator Authorized Agent Name (Print) Frank Robinson		q. Signature <i>Frank Robinson</i>		r. Date 8/7/10	

II. TRANSPORTER (Generator completes IIa-b and Transporter completes IIc-e)

a. Transporter's Name and Address: FREEHOLD CANTAGE, INC. 825 ROUTE 33, FREEHOLD, NJ 07728	
b. Phone: 732-462-1001	
c. Driver Name (Print) John P. ...	d. Signature <i>John P. ...</i>
e. Date 8/9/10	

III. DESTINATION (Generator complete IIIa-c and Destination Site completes IIId-g)

a. Disposal Facility and Site Address: MODERN LANDFILL 4400 MT PISGAH RD, YORK, PA 17402	b. Phone: 717-246-4535	c. US EPA Number NA	d. Discrepancy Indication Space:
I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.			
e. Name of Authorized Agent (Print)	f. Signature <i>...</i>	g. Date 8/10/10	

IV. ASBESTOS (Generator completes IVa-f and Operator complete IVg-i)

a. Operator's Name and Address:	c. Responsible Agency Name and Address:
b. Phone:	d. Phone:
e. Special Handling Instructions and Additional Information:	
f. <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Non-Friable <input type="checkbox"/> Both % Friable % Non-Friable	
OPERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.	
g. Operator's Name and Title (Print)	h. Signature
i. Date	
*Operator refers to the company which owns, leases, operates, controls, or supervises the facility being demolished or renovated, or the demolition or renovation operation or both	

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13021		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, 20th FL, NEW YORK, NY 10007-1866							
4. Generator's Phone (212) 637-4273							
5. Transporter 1 Company Name FREEHOLD CARTAGE INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address ENVIRONMENTAL RECOVERY CORP 1076 OLD MANHEIM PIKE, LANCASTER, PA 17601		10. US EPA ID Number N/A		E. State Facility's ID 301344		F. Facility's Phone 717-393-2627	
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type		Unit Wt./Vol.	
a. NON HAZARDOUS NON REGULATED (PURGE WATER)				1 1T		2,883 G	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: STEWART AVE AND CLINTON RD GARDEN CITY, NY				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
ON BEHALF OF U.S. EPA REGION II				Date			
Printed/Typed Name MIKE EHNOT		Signature <i>[Signature]</i>		Month 3		Day 13	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name Dan Wagner		Signature <i>[Signature]</i>		Month		Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name		Signature		Month		Day Year	
19. Discrepancy Indication Space							
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.							
Printed/Typed Name Brenda Weaver				Signature <i>[Signature]</i>		Date 3/13	

NON-HAZARDOUS WASTE

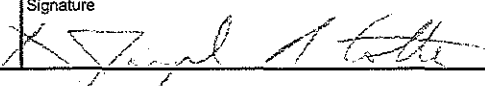
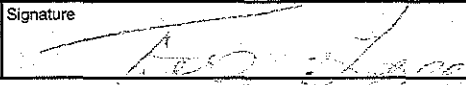
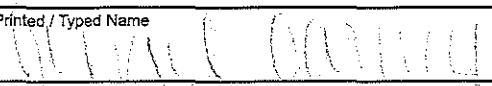
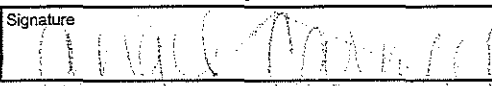
GENERATOR

TRANSPORTER

FACILITY

ENVIRONMENTAL RECOVERY CORPORATION

NON-HAZARDOUS WASTE MANIFEST

Generators Name and Site Address USEPA Region II - Roosevelt Clinton Road Garden City, NY 11530		Manifest No. 100920	
		Generator Contact Ken Lippay	
		Generator Phone (732) 600-0993	
Transporter Company Name Environmental Recovery Corp.		US EPA ID Number PAD987266749	
Transporter Company Address 1076 Old Manheim Pike, Lancaster, PA 17601		Transporter Contact Scott Reisinger	
		Transporter Phone (717) 393-2627	
Designated Facility Name and Site Address Environmental Recovery Corporation 1076 Old Manheim Pike Lancaster, PA 17601		US EPA ID Number PAD987266749	
		State Facility's ID Number 301344	
		Facility's Phone (717) 393-2627	
WASTE DESCRIPTION		Containers	
		No.	Type
a. Non-Haz Groundwater Sediment/Sludge b. c. d.		XX	TT
Other Comments Work Order # RAG-3264			
TYPES OF CONTAINERS BA = Burlap, cloth, paper or plastic bags, super sac CF = Fiber or plastic boxes, cartons, cases, cubic yd. box CM = Metal boxes, cartons, cases (including roll-offs) CW = Wooden boxes, cartons, cases, pallet DF = Fiberboard or plastic drums, barrels, kegs DM = Metal drums, barrels, kegs, pails DT = Dump truck DW = Wooden drums, barrels, kegs TT = Cargo tanks (tank trucks) TP = Liqua bins / totes			
UNITS OF MEASURE (UOM) G = Gallons (liquids only) P = Pounds T = Tons (2000 pounds) Y = Cubic Yards			
I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.			
On behalf of EPA Region 2 Printed / Typed Name Joseph Coffer		Signature 	
		Date Month Day Year 3 18 13	
Transporter Acknowledgement of Receipt of Materials Printed / Typed Name THIS IS THE 100920		Signature 	
		Date Month Day Year 3 18 13	
Discrepancy Indication Space (Empty space for discrepancies)			
Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted above			
Printed / Typed Name 		Signature 	
		Date Month Day Year 3 18 13	

White Copy: Environmental Recovery Corp.

Yellow Copy: Invoice Copy

Pink Copy: Transporter

Gold Copy: Generator

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on site (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <div style="text-align: center;">N/A</div>		Manifest Document No. <div style="text-align: center;">13022</div>	2. Page 1 of 1
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, 20th FL, NEW YORK, NY 10007-1866					
4. Generator's Phone (212) 637-4273					
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 732-462-10001	
9. Designated Facility Name and Site Address ENVIRONMENTAL RECOVERY CORP 1076 OLD MANHEIM PIKE# LANCASTER, PA 17601		10. US EPA ID Number N/A		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID 301344	
				F. Facility's Phone 717-393-2627	
11. WASTE DESCRIPTION				12. Containers	
				No.	Type
a. NON HAZARDOUS NON REGULATED (PURGE WATER)				1	TT
					2228
					G
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: STEWART AVE AND CLINTON RD GARDEN CITY, NY				H. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information R-1167840me					

NON-HAZARDOUS WASTE

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
ON BEHALF OF US EPA REGION II					Date
Printed/Typed Name MIKE EHNDT		Signature 		Month Day Year 3 12 13	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name GARY WHITE		Signature 		Month Day Year 3 12 13	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted on item 19.					
Printed/Typed Name MEUVILLE DIXON					Date
Signature 					Month Day Year 3 12 13

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

TRUCKER COPY

9613

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.

CUSTOMER NAME:
MATERIAL SALE - CHECK

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE

MATERIAL DESCRIPTION:

GROSS	TARE	NET	UNIT	WEIGHED BY

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13009		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4725							
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113			
				B. Transporter 1 Phone 732-462-1001			
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID			
				D. Transporter 2 Phone			
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0			
				F. Facility's Phone 631-586-5900			
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type		Unit	
a. NON HAZARDOUS, NON REGULATED (SOIL)				1 CM		EST 22 T	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # <u>9613</u>				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
<div style="border: 2px solid black; padding: 5px; margin: 10px auto; width: 80%;"> 16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations. </div>							
ON BEHALF OF US EPA REGION II						Date	
Printed/Typed Name MIKE EMMOT				Signature <i>[Signature]</i>		Month Day Year 3 8 13	
17. Transporter 1 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name Brian Prowcast				Signature <i>[Signature]</i>		Month Day Year 3 8 13	
18. Transporter 2 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space #5045 (20) 50,260 1012TW 944673							
20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.						Date	
Printed/Typed Name				Signature <i>[Signature]</i>		Month Day Year 3 8 13	

NON-HAZARDOUS WASTE

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

CUSTOMER COPY

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
310001		DE45	LANDFILL		WIC436	344573

CUSTOMER NAME: 705-201
MATERIAL SALE - CHECK

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE
3/08/13			SCM

MATERIAL DESCRIPTION: LANDFILL

DELIVERY ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13009

RECEIVED BY:

CARRIER SIGNATURE

CUSTOMER SIGNATURE

SEE REVERSE SIDE FOR COLLECTION TERMS

GROSS	TARE	NET	UNIT	WEIGHED BY
20.13	12.41	10.72	TONS	CHN
IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.	
	10.13	NO	AK0415	NO

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY
OFFICE USE ONLY



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924BILL OF LADING
FCI EPA ID NO. NJD054126164

S 407005

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-16135533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803) 773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS U.S. EPA Region II / Roosevelt 290 Broadway New York, NY 10007		PHONE (AREA CODE) 212-637-4725 TRACTOR 705 TRAILER N/A		APPOINTMENT TIME N/A	
FCI REP. LOADING (PRINT) Brian Pancoast	PROCEDURE Remove	EQUIP. SPOTTED N/A	EQUIP. REMOVED 9613	TIME AT SHIPPER 13:15	(MILITARY TIME ONLY) 13:45
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED	

BROKER: 947427		MANIFEST / DOCUMENT NO. 13009								
PO#:	WO#:	947247								
(X) NO.	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	Sol	N/A	N/A	N/A	1	cm	Est 22	+	N/A	5
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE	SHIPPER'S SIGNATURE X	DATE LOADED 3 / 8 / 15
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT		MO. DAY YR.

CONSIGNEE NAME/ADDRESS 110 Sand Co. 136 Spagoli rd Melville, NY 11747		PHONE (AREA CODE) 631-586-5900 TRACTOR 705 TRAILER N/A		APPOINTMENT TIME N/A	
FCI REP. UNLOADING (PRINT) Brian Pancoast	PROCEDURE dump	EQUIP. SPOTTED 9613	EQUIP. REMOVED 9613	TIME AT CONSIGNEE 14:15	(MILITARY TIME ONLY) 15:45
COMMENTS OR DELAYS AT CONSIGNEE 944673				EQUIPMENT USED	
PLEASE PRINT NAME/TITLE KNIBOTB WR	CONSIGNEE SIGNATURE X	DATE UNLOADED 3 / 8 / 15		MO. DAY YR.	

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	- 15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
Yellow - FCI Billing
Blue - FCI Office/Customer
Green - Retained by TSDF
Gold - Retained by Generator

S 407005



FREEHOLD CARTAGE INC.

P.O. BOX 5010 • FREEHOLD, NJ 07728-5010
(732) 462-1001 • FAX (732) 308-0924BILL OF LADING
FCI EPA ID NO. NJD054126164

S 407005

350 Pigeon Point Road
New Castle, DE 19720
Phone: (302) 658-2005
Fax: (302) 658-6229175 Bartow Mun. Airport
Bartow, FL 33830
Phone: (863) 533-4599
Fax: (863) 533-16135533 Dunham Road
Maple Heights, OH 44137
Phone: (330) 835-3473
Fax: (330) 835-3732108 Monahan Avenue
Dunmore, PA 18512
Phone: (570) 342-7232
Fax: (570) 342-7367132 Myrtle Beach Hwy.
Sumter, SC 29153
Phone: (803)-773-2611
Fax: (803) 773-2942

SHIPPER NAME/ADDRESS U.S. EPA Region II / Roosevelt 290 Broadway New York, NY 10007		PHONE (AREA CODE) 212-637-4725 TRACTOR 705 TRAILER N/A		APPOINTMENT TIME N/A	
FCI REP. LOADING (PRINT) Brian Poncast	PROCEDURE Remove	EQUIP. SPOTTED N/A	EQUIP. REMOVED 9613	TIME AT SHIPPER 13:15	(MILITARY TIME ONLY) 13:45
COMMENTS OR DELAYS AT SHIPPER				EQUIPMENT USED	

BROKER: 947427		MANIFEST / DOCUMENT NO. 13009								
PO#:	WO#:									
(X) KEN	PROPER U.S. D.O.T. SHIPPING NAME	U.S. D.O.T. HAZARDOUS CLASS	NA/UN/NO.	PACKING GROUP	NO. CONT.	CONT. TYPE	NET QUANTITY	UNIT MEASURE	WASTE NO.	FORM
1	Sol	N/A	N/A	N/A	1	cm	Est 22	+	N/A	5
2										
3										

SPECIAL HANDLING INSTRUCTIONS INCLUDING CONTAINER EXEMPTION NUMBER.

SHIPPER'S CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, U.S. EPA and the State. The materials described above were consigned to the Transporter named. The consignee can and will accept the shipment and has a valid permit to do so if required. I certify that the foregoing is true and correct to the best of my knowledge.

Payment to the contractor for waste removal does not constitute payment to the carrier and if the contractor does not pay the carrier, the shipper is obligated to pay the agreed rate offered to the contractor.

PLEASE PRINT NAME/TITLE	SHIPPER'S SIGNATURE X	DATE LOADED 3 / 8 / 15
I HAVE READ THE ABOVE AND UNDERSTAND AND AGREE TO ALL OF ITS CONTENT		MO. DAY YR.

CONSIGNEE NAME/ADDRESS 110 Sand Co. 136 Spagoli rd Melville, NY 11747		PHONE (AREA CODE) 631-586-5900 TRACTOR 705 TRAILER N/A		APPOINTMENT TIME N/A	
FCI REP. UNLOADING (PRINT) Brian Poncast	PROCEDURE dump	EQUIP. SPOTTED 9613	EQUIP. REMOVED 9613	TIME AT CONSIGNEE 14:15	(MILITARY TIME ONLY) 15:45
COMMENTS OR DELAYS AT CONSIGNEE 944673				EQUIPMENT USED	
PLEASE PRINT NAME/TITLE KNIBOTB WR	CONSIGNEE SIGNATURE X	DATE UNLOADED 3 / 8 / 15		MO. DAY YR.	

AR H-0257	MD HWH-167	MO H-1490	OH UPW-0190713-OH	TX 40705
CT CT-HW-307	2001-OPV-2335	ND WH-429	OK UPW-0190713-OH	WI 11602
DE DE-HW-203	ME ME-HWT-47	NH TNH-0047	ONTARIO, CANADA A 840943	WV UPW-0190713-OH
DE-SW-203	ME-WOT-47	NJ S-2265	PA PA-AH-0067	
IL UPW-0190713-OH	MI UPW-0190713-OH	15939	QUEBEC, CANADA QC-6ML-047	
MA MA-294	MN UPW-0190713-OH	NY NJ-113	RI RI-535	

White - FCI Original
 Yellow - FCI Billing
 Blue - FCI Office/Customer
 Green - Retained by TSDP
 Gold - Retained by Generator

S 407005

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

TRUCKER COPY

9613

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.

CUSTOMER NAME:
MATERIAL SALE - CHECK

GROSS	TARE	NET	UNIT	WEIGHED BY

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.

MATERIAL DESCRIPTION:

2:20- D20796



NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.		2. Page 1 of	
3. Generator's Name and Mailing Address US EPA Region 2 257 Clinton Rd NY 11530 Garden City, NY 4. Generator's Phone (516) 637-4273							
5. Transporter 1 Company Name McVAC Environmental Services		6. US EPA ID Number CTR 000005058		A. State Transporter's ID PA-AH 0801		B. Transporter 1 Phone 803-498-1427	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address Environmental Recovery Corporation 1076 Old Manheim Pike Lancaster PA 17601		10. US EPA ID Number PA0987266748		E. State Facility's ID		F. Facility's Phone	
11. WASTE DESCRIPTION Old Roosevelt Field directional drilling mud tank Non-KCRA Non-DOT a. 1507-02053-LPT Drilling Mud				Containers No. Type 001 TT		13. Total Quantity 5.38	
b.						14. Unit WT/Vol. T	
c.							
d.							
G. Additional Descriptions for Materials Listed Above				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
Printed / Typed Name Muzaffar Rahmani on Behalf				Signature M. A. Rahmani		Date Month Day Year 7/9/15	
17. Transporter 1 Acknowledgement of Receipt of Materials <input checked="" type="checkbox"/> EPA							
Printed / Typed Name Frederico Mancino				Signature [Signature]		Date Month Day Year 7/14/15	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed / Typed Name				Signature		Date Month Day Year	
19. Discrepancy Indication Space 5.38 TONS							
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.							
Printed / Typed Name Jolene Smith				Signature [Signature]		Date Month Day Year 7/14/15	



WEIGHED ON A FAIRBANKS SCALE

Environmental Recovery Corp.

1076 Old Manheim Pike

Lancaster, PA 17601

(717) 393-2627

Transporter: MCVAC

Generator: USEPA

Generator Address: _____

Product Description: _____

INBOUND 58600 lb
LOOP ID 986

Inbound Date: 7-14-15 Time: 2:36PM

Outbound Date: 7-14-15 Time: 4:23PM

58600 lb GROSS
47840 lb TARE
10760 lb NET

Driver On: LOOP ID 986 Off: _____

5.38 Tons

SIGNATURES

Transporter: [Signature]

Weigher: [Signature]

Weighmaster License #: 77350

No. 1588

ORIGINAL COPY

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13002		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4275							
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NYD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID 13939		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD. MILVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0			
				F. Facility's Phone 631-586-5900			
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
a. NON HAZARDOUS, NON REGULATED" (SOIL)				No. Type		14. Unit Wt./Vol.	
				1 0M		EST. 22 T	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AND CLINTON AVE GARDEN CITY, NY CONTAINER # DD37				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
ON BEHALF OF US EPA REGION II						Date	
Printed/Typed Name MIKE EHVOT						Signature Mike EHVOT	
17. Transporter 1 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name Ralph Cangaloni						Signature Ralph Cangaloni	
18. Transporter 2 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name						Signature	
19. Discrepancy Indication Space # 939710						11-6110	
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.						Date	
Printed/Typed Name R-60-3951 - GW-52,320						Signature 88	
						2/15/13	

NON-HAZARDOUS WASTE

TRUCKER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001		5245	LANDFILL		012435	939712

CUSTOMER NAME
FCI#705-20Y
MATERIAL SALE - CHECK

DATE	WEIGHT	TRUCK CODE	MATERIAL CODE
2/15/13			950

MATERIAL DESCRIPTION
HISTORIC FILL

DELIVERY ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13001

RECEIVED BY
CARRIER SIGNATURE

CUSTOMER SIGNATURE

SEE REVERSE SIDE FOR COLLECTION TERMS

GROSS	TARE	NET	UNIT	WEIGHED BY
27.25	14.67	12.58	TONS	TEM

IN	OUT	CHECK NO.	CHARGE TYPE	LICENSE NO.
	10.55		MC	4H542S NJ

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY

DESIGN USE ONLY
11.58 TM 10 CYD

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on 8 1/2 x 11 (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13001	2. Page 1 of 1
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007		4. Generator's Phone (212) 637-4275		5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.	
6. US EPA ID Number NJD 054 126 164		7. Transporter 2 Company Name		8. US EPA ID Number	
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD, MELVILLE, NY 11747		10. US EPA ID Number N/A		A. State Transporter's ID NJ-113	
				B. Transporter 1 Phone 732-462-1901	
				C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID 1-4726-00490-00003-0	
				F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION		12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON HAZARDOUS, NON REGULATED (SOIL)		1	CM	EST. 22	T
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON RD GARDEN CITY, NY CONTAINER #0042		H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
ON BEHALF OF U.S. EPA REGION II		Printed/Typed Name MAYKE EHADI		Signature [Signature]	
				Date Month Day Year 2 15 13	
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name Brian Pincus		Signature [Signature]	
				Date Month Day Year 2 15 13	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature	
				Date Month Day Year	
19. Discrepancy Indication Space (20)		FCI # 705 - #5245 - GW-54,500 # 939712 12.58 ft			
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name JL MOONEY		Signature [Signature]		Date Month Day Year 2 15 13	

NON-HAZARDOUS WASTE



TRUCKER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001		3951	LANDFILL		012435	939710

CUSTOMER NAME
PC 17075-20Y
MATERIAL SALE - CHECK

DATE	WEIGHT	TRUCK CODE	MATERIAL CODE
2/15/13			950

MATERIAL DESCRIPTION
HISTORIC FILL

DELIVERY ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13002

RECEIVED BY
CARRIER SIGNATURE *[Signature]*
CUSTOMER SIGNATURE

SEE REVERSE SIDE FOR COLLECTION TERMS

GROSS	TARE	NET	UNIT	WEIGHED BY
26.15	14.55	11.61	TONS	TEH

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.
	10.51	MC	A4395E NJ

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY

11.61 TN at 10 CYD

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13007		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4275							
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address XIRONHAZ 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0		F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION a. NON HAZARDOUS, NON REGULATED (SOIL) b. c. d.				12. Containers		13. Total Quantity	
				No. Type		Unit Wt/Vol	
				1 CM		EST. 22 T	
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: XX ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 0008				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
ON BEHALF OF US EPA REGION II				Date			
Printed/Typed Name MIKE BRUNT		Signature <i>[Signature]</i>		Month 2		Day Year 19 13	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name AC JOHNSON		Signature <i>[Signature]</i>		Month 2		Day Year 19 13	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name		Signature		Month		Day Year	
19. Discrepancy Indication Space 18.067 940391							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.							
Printed/Typed Name				Signature <i>[Signature]</i>		Date 2/19/13	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

CUSTOMER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	PO NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001	2	395	LANDFILL		012435	940391

CUSTOMER NO. 910001

MATERIAL SALE - CHECK

DATE	PERCENTAGE	TRUCK CODE	MATERIAL CODE
2/19/13			950

MATERIAL DESCRIPTION: UNCL. FILL

GROSS	TARE	NET	UNIT	WEIGHED BY
32.32	14.26	18.06	TONS	CAK

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.
	12337	MFC	AA3965 NJ

DELIVERY ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13007

RECEIVED BY:

CARRIER
SIGNATURECUSTOMER
SIGNATURE

SEE REVERSE SIDE FOR COLLECTION TERMS

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY

18.06 TN
20 CYD

398 57,280

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13005		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4275							
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0		F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type		Unit Wt/Vol.	
a. NON HAZARDOUS, NON REGULATED (SOIL)				1 CM		EST. 22 T	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 9620				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
ON BEHALF OF US EPA REGION II						Date	
Printed/Typed Name X MIKE EHNDT				Signature X [Signature]		Month Day Year 2/19/13	
17. Transporter 1 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name X [Signature]				Signature X [Signature]		Month Day Year 2/19/13	
18. Transporter 2 Acknowledgement of Receipt of Materials						Date	
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space 13.52 JV 940253							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.							
Printed/Typed Name						Date	
Signature [Signature]				Month Day Year 2/19/13			

NON-HAZARDOUS WASTE



CUSTOMER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001	398	LANDFILL		012436	940253

CUSTOMER NAME 747-30YS

MATERIAL SALE - CHECK

DATE	QUANTITY	UNIT	MATERIAL CODE
2/19/13			950

MATERIAL DESCRIPTION ORIC FILL

GROSS	TARE	NET	UNIT	WEIGHED BY
28.54	15.12	13.52	TONS	CAK

IN	OUT	CHECK NO / CHARGE TYPE	LICENSE NO.
	8.47	MC	AG3986 NJ

DELIVER ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13005

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY

RECEIVED BY
<i>[Signature]</i>
CARRIER SIGNATURE
<i>[Signature]</i>
CUSTOMER SIGNATURE

13.52 TN 30 CYD

SEE REVERSE SIDE FOR COLLECTION TERMS

NON-HAZARDOUS WASTE MANIFEST

762 497 64,960

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13003		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone 212 637-4275							
5. Transporter 1 Company Name FRESHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113			
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone 732-462-1001			
				C. State Transporter's ID			
				D. Transporter 2 Phone			
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0			
				F. Facility's Phone 631-586-5900			
11. WASTE DESCRIPTION a. NON HAZARDOUS, NON REGULATED (SOIL)				12. Containers		13. Total Quantity	
				No. Type		Unit	
				1 CM		EST 22 T	
15. Special Handling Instructions and Additional Information				H. Handling Codes for Wastes Listed Above			
C. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 9781							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
ON BEHALF OF US EPA REGION II Printed/Typed Name: x MIKE ENNOT				Signature: <i>[Signature]</i>			
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name: Bob Adamczyk				Signature: <i>[Signature]</i>			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name:				Signature:			
19. Discrepancy Indication Space 15.26 TV 940085							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 9. Printed/Typed Name:				Signature: <i>[Signature]</i>			
				Date: 2/10/13			

NON-HAZARDOUS WASTE



CUSTOMER COPY

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001		497	LANDFILL		012436	940085

CUSTOMER NAME: PCL 11/62-20Y

MATERIAL: HALF CHECK

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE
2/18/13			950

MATERIAL DESCRIPTION: ORIC FILL

GROSS	TARE	NET	UNIT	WEIGHED BY
32.48	17.22	15.26	TONS	CAK
IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.	
	9429	MC	A4497P	NJ

DELIVERY ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13000

RECEIVED BY:

CARRIER
SIGNATURECUSTOMER
SIGNATURE

SEE REVERSE SIDE FOR COLLECTION TERMS

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY
15 26 7N 20 CYD

NON-HAZARDOUS WASTE MANIFEST

398 60,600

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13004		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4275							
5. Transporter 1 Company Name FREEMOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0		F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type		Unit	
a. NON HAZARDOUS, NON REGULATED (SOIL)				1 CM		EST. 22 T	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 9660				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
<div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> 16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations. </div>							
ON BEHALF OF US EPA REGION II Printed/Typed Name: X MIKE ELLIOTT						Date: 2/18/13	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name: Th Reever						Signature: <i>[Signature]</i> Date: 2/18/13	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name:						Signature: <i>[Signature]</i> Date:	
19. Discrepancy Indication Space 15.19TN 940083							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Printed/Typed Name:						Signature: <i>[Signature]</i> Date: 2/18/13	

NON-HAZARDOUS WASTE



CUSTOMER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001		398	LANDFILL		012436	940083

CUSTOMER NAME: PCI 747 30YS
MATERIAL SALE - CHECK

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE
2/18/13			980

MATERIAL DESCRIPTION: WTCORIC FILL

GROSS	TARE	NET	UNIT	WEIGHED BY
30.30	15.11	15.19	TONS	AK

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.
	9:25	MC	A03980 NJ

DELIVERY ADDRESS
INNOVATIVE RECYCLING TECH ROOSEVELT FIELD MAN#13004

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY

RECEIVED BY:

CARRIER SIGNATURE: *L. Revere*

CUSTOMER SIGNATURE: _____

SEE REVERSE SIDE FOR COLLECTION TERMS

15.19 TN
30 CYD

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13010		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/R. ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4725							
5. Transporter 1 Company Name ARCO				6. US EPA ID Number NYR 000 107 326		A. State Transporter's ID 1642983	
7. Transporter 2 Company Name				8. US EPA ID Number		B. Transporter 1 Phone 631-586-5900	
9. Designated Facility Name and Site Address 110 SAND DR 136 SPACGLI R MELVILLE, NY 11747				10. US EPA ID Number N/A		C. State Transporter's ID	
						D. Transporter 2 Phone	
						E. State Facility's ID 1-4726-00490-00003-b	
						F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION						12. Containers	
						No. Type	
a. NON HAZARDOUS, NON REGULATORY (3011)						1 20	
b.							
c.							
d.							
13. Total Quantity 22.0						14. Unit T	
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MAIL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 212647						H. Handling Codes for Wastes Listed Above	
15. Special Handling Instructions and Additional Information 2/14/13							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
Printed/Typed Name						Signature	
Date						Month Day Year	
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name						Signature	
Date						Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name						Signature	
Date						Month Day Year	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.							
Printed/Typed Name						Signature	
Date						Month Day Year	

NON-HAZARDOUS WASTE



110 Sand Company

170 Cabot Street
West Babylon, New York 11704

TRUCKER COPY

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
310001		1642	LANDFILL		012436	939517

CUSTOMER NAME: #472-20Y
MATERIAL SALE - CHECK

DATE	TRUCK	MATERIAL
2/14/13	1642	300

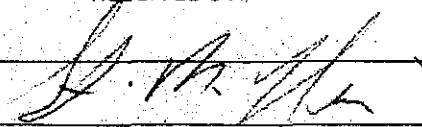
MATERIAL DESCRIPTION: LANDFILL

GROSS	TARE	NET	UNIT	WEIGHED BY
38.24	17.88	20.36	TONS	CAF

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.
	13117	ML	11-12-11

RECEIVED ADDRESS
ROOSEVELT FIELD MAN#13010

RECEIVED BY:

ARRIER SIGNATURE	
CUSTOMER SIGNATURE	

SEE REVERSE SIDE FOR COLLECTION TERMS

TOTAL TODAY
QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY
20 CYD

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <div style="text-align: center;">N/A</div>		Manifest Document No. 13006		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4275							
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number <div style="text-align: center;">N/A</div>		E. State Facility's ID 1-4726-00490-00003-0		F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type		Unit Wt./Vol.	
a. NON HAZARDOUS, NON REGULATED (SOIL)				1 1 CM		EST. 22 T	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 0480				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
ON BEHALF OF US EPA REGION II				Date			
Printed/Typed Name MIKE EHNDT				Signature <i>[Signature]</i>		Month Day Year 2 27 13	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name Ralph Gargaloni				Signature <i>[Signature]</i>		Month Day Year 02 27 13	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date			
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space 3951-66240 #942229 18.94th							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.				Date			
Printed/Typed Name H. Mooney				Signature <i>[Signature]</i>		Month Day Year 2 27 13	

NON-HAZARDOUS WASTE

TRANSPORTER

FACILITY

CUSTOMER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001		3961	LANDFILL		012436	942229

CUSTOMER NAME:

FCI#675-20Y

MATERIAL SALE - CHECK

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE
2/27/13			950

MATERIAL DESCRIPTION:

HISTORIC FILL

DELIVERY ADDRESS

INNOVATIVE RECYCLING TECH
ROOSEVELT FIELD MAN#13006

RECEIVED BY:

CARRIER SIGNATURE _____

CUSTOMER SIGNATURE _____

SEE REVERSE SIDE FOR COLLECTION TERMS

GROSS	TARE	NET	UNIT	WEIGHED BY
33.62	14.68	18.94	12 CYD TONS	TEM
IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.	
	10:39	MC	AA395E	NJ

TOTAL TODAY

QUANTITY THIS ORDER TODAY

LOADS THIS ORDER TODAY

18.94 TN
12 CYD

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A		Manifest Document No. 13008		2. Page 1 of 1	
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007							
4. Generator's Phone (212) 637-4275							
5. Transporter 1 Company Name FREEHOLD CARTAGE, INC.		6. US EPA ID Number NJD 054 126 164		A. State Transporter's ID NJ-113		B. Transporter 1 Phone 732-462-1001	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address 110 SAND CO. 136 SPAGNOLI RD MELVILLE, NY 11747		10. US EPA ID Number N/A		E. State Facility's ID 1-4726-00490-00003-0		F. Facility's Phone 631-586-5900	
11. WASTE DESCRIPTION				12. Containers		13. Total Quantity	
				No. Type		Unit	
a. NON HAZARDOUS, NON REGULATED (SOIL)				1 CM		EST 22 T	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL STEWART AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # <u>9869</u>				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
<div style="border: 2px solid black; padding: 5px; margin: 10px auto; width: 80%;"> 16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations. </div>							
ON BEHALF OF U.S. EPA REGION II Printed/Typed Name: MIKE EMMETT Signature: <i>[Signature]</i>				Date: 2/27/13 Month Day Year			
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name: Brian Pancoast Signature: <i>[Signature]</i>				Date: 2/27/13 Month Day Year			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name: Signature:				Date: Month Day Year			
19. Discrepancy Indication Space 5245-641580 REMADE TRTVOIDED # 942230 17.25th							
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. W/94232				Date: 2/27/13 Month Day Year			
Printed/Typed Name: Thomson Signature: <i>[Signature]</i>							

NON-HAZARDOUS WASTE



CUSTOMER COPY

TELEPHONES

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	P.O. NUMBER	TRUCK NO.	TYPE OF SALE	JOB NO.	OUR ORDER NUMBER	TICKET NO.
910001		5245	LANDFILL		012436	942232

CUSTOMER NAME:

#CI#706-20Y

MATERIAL SALE - CHECK

DATE	TAX PERCENTAGE	TRUCK CODE	MATERIAL CODE
2/27/13			950

MATERIAL DESCRIPTION:

HISTORIC FILL

GROSS	TARE	NET	UNIT	WEIGHED BY
32.29	15.04	17.25	TONS.	TEM

IN	OUT	CHECK NO./CHARGE TYPE	LICENSE NO.
	10:46	MC	AM542S NJ

DELIVERY ADDRESS

INNOVATIVE RECYCLING TECH
ROOSEVELT FIELD MAN#13008

RECEIVED BY: _____

CARRIER SIGNATURE _____

CUSTOMER SIGNATURE _____

SEE REVERSE SIDE FOR COLLECTION TERMS

TOTAL TODAY

QUANTITY THIS ORDER TODAY

LOADS THIS ORDER TODAY

OFFICE USE ONLY

17.25 TN
12 CYD

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on site (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. N/A	Manifest Document No. 13011	2. Page 1 of 1
3. Generator's Name and Mailing Address U.S. EPA REGION II/ROOSEVELT 290 BROADWAY, NEW YORK, NY 10007				
4. Generator's Phone (212) 637- 4444 4275				
5. Transporter 1 Company Name AARCO	6. US EPA ID Number NYR 000 107 326	A. State Transporter's ID 1629PC		
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter 1 Phone 631-586-5900		
9. Designated Facility Name and Site Address 110 SAND XO 136 SPANGLI RD WELVILLE, NY 11747		C. State Transporter's ID		
		D. Transporter 2 Phone		
		E. State Facility's ID 1-4726-00490-00003-0		
		F. Facility's Phone 631-586-5900		
11. WASTE DESCRIPTION		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol.
a. NON HAZARDOUS, NON REGULATED (SOIL)		1 CM	220	T
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above SITE ADDRESS: ROOSEVELT FIELD MALL SPENCER AVE AND CLINTON AVE GARDEN CITY, NY CONTAINER # 1141		H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information				
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.				
Printed/Typed Name		Signature		Date Month Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Date Month Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Date Month Day Year
19. Discrepancy Indication Space 18.31 TON 12/14/13				
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.		Signature		Date Month Day Year 2/14/13

NON-HAZARDOUS WASTE



TRUCKER COPY

110 Sand Company

170 Cabot Street
West Babylon, New York 11704

TELEPHONES

Office - 631-249-4108
Scalehouse - 631-694-2822
Landfill - 631-694-2848

CUSTOMER NO.	TRUCK NO.	LOAD NO.	CUSTOMER NAME	CUSTOMER ADDRESS	TICKET NO.
910001	1542	LANDFILL			012435 939404

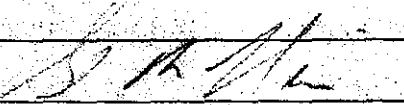

CUSTOMER NAME: **ARCLO#472-20Y**
MATERIAL SALE - CHECK

2/14/13		950
---------	--	-----

MATERIAL DESCRIPTION: **HISTORIC FILL**

ROOSEVELT FIELD MAN#13011

RECEIVED BY:

CARRIER SIGNATURE: 
CUSTOMER SIGNATURE: 

SEE REVERSE SIDE FOR COLLECTION TERMS

36.27	17.96	18.31	TONS	CAK
9:15		MC	16429PC	

QUANTITY THIS ORDER TODAY
LOADS THIS ORDER TODAY

18.31 TN 20 CYD

ORIGINAL — NOT NEGOTIABLE

Carrier No. _____

Page 1 of 1

CLEAR BROOK

(Name of carrier)

(SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO:

Consignee **U.S. EPA REGION II TREATMENT PLANT**

Street **CLINTON RD**

City **GARDEN CITY**

State **NY**

Zip Code

FROM: U.S. EPA REGION II/ROOSEVELT FIELD SITE
Shipper

Street STEWART AVE & CLINTON RD

City **GARDEN CITY**

State **NY**

Zip Code

24 hr. Emergency Contact Tel. No.

Route

Vehicle
NumberPLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES

FREIGHT PREPAID except when box at right is checked	Check box if charges are to be collected
<input type="checkbox"/>	<input type="checkbox"/>

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if, on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to des-

tionation and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER U.S. EPA Region 7

PER

CARRIER Clear Brook

PER

DATE _____

Permanent post-office address of shipper.



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UNITED WITH

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1

Shipper No. _____

ORIGINAL — NOT NEGOTIABLE

Carrier No. _____

Page 1 of 1

Clear Brook

(Name of carrier)

(SCAC)

Date 2/20/13

On Collect or Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO:

Consignee US EPA Region IV/Knoxville

Street CLINTON RD TREATMENT PLANT

City GARDEN CITY State, NY Zip Code _____

FROM: U.S. EPA / Roosevelt
Shipper

Street STEWART Ave & CLINTON Rd

City Green City State NY Zip Code

Route

Vehicle
NumberPLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

C.O.D. FEE:
PREPAID ☐
COLLECT ☐

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES

FREIGHT PREPAID except when box at right is checked	Check box if charges are to be collected
<input type="checkbox"/>	<input type="checkbox"/>

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to de-

tion and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER *U.S. EPA Region II*

PER MIKE FENOT 2/20/13

CARRIER Clear Brook

PER

DATE 2/20/13

Permanent post-office address of shipper.



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END OF THE

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Shipper No. _____

Carrier No. _____

Date 2/2/11

Page 1 of 1

(Name of carrier)

(SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1

TO:

Consignee U.S. EPA REGION II TREATMENT PLANT

Street CLINTON RD

City **GARDEN CITY** State, **NY** Zip Code

FROM: Shipper U.S. EPA REGION II/ROOSEVELT FIELD SITE

Street STEWART AVE & CLINTON RD

City **GARDEN CITY** State **NY** Zip Code

Route

Vehicle
Number[illegible]PLACARDS TENDERED: YES ☐ NO ☐REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES

FREIGHT PREPAID except when box at right is checked	<input type="checkbox"/>	Check box if charges are to be collect
--	--------------------------	--

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent the value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention: in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(a) of Tariff, Rules of Landing, Freight and Bill of Lading, and Section 1(a) of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

(Signature of Consignor)

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (or the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to des-

Shipment and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER U.S. Fed. Reserve II

PER

CARRIER

PER

DATE 2/21/13

Permanent post-office address of shipper.



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FIELD WITH

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STYLE CF365-4 © 2003 LABELMASTER® (800) 621-5303 www.labelmaster.com

Carrier No. _____

Date 2/27/13Page 1 of 1Clear Brook

(Name of carrier)

(SCAC)

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO:

Consignee U.S. EPA REGION II TREATMENT PLANTStreet OLINTON RDCity GARDEN CITY State NY Zip Code _____

FROM:

Shipper U.S. EPA REGION II/ ROOSEVELT FIELD SITEStreet STEWART AVE & OLINTON RDCity GARDEN CITY State NY Zip Code _____

24 hr. Emergency Contact Tel. No. _____

Route _____

Vehicle
Number _____

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class UN or NA Number, Packing Group or UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 T/T		NON HAZARDOUS NON REGULATED WATER	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4800			
1		" " "	4000			

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependant on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature _____

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$ _____

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ \$ _____TOTAL
CHARGES \$ _____

FREIGHT CHARGES
FREIGHT PREPAID ☐ Check box if charges
except when box all right is checked ☐ are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER

CARRIER Clear Brook

PER

PER

DATE

2/27/13

Permanent post-office address of shipper.

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3

Shipper No.

Carrier No.

Page 1 of 1

(Name of carrier)

(SCAC)

Date _____

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec. 1.

TO:

Consignee **U.S. EPA REGION II TREATMENT PLANT**

Street **CLINTON RD**

City **GARDEN CITY** State, **NY** Zip Code

FROM:

FROM: U.S. EPA REGION II/ROOSEVELT FIELD SITE
Shipper

Street **STEWART AVE & CLINTON RD**

City **GARDEN CITY** State **NY** Zip Code

24 hr. Emergency Contact Tel. No.

Route

Vehicle
Number

No. of Units & Container Type	HM	BASIC DESCRIPTION Proper Shipping Name, Hazard Class or UN or NA Number, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 T/T		NON HAZARDOUS NON REGULATED WATER	4800			
/		// //	//			
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/		// //	//			
/		// //	//			
/		// //	//			
/		// //	//			
/		// //	4800			

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."

(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.

(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Signature

REMIT
C.O.D. TO:
ADDRESS

COD

Amt: \$

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

C.O.D. FEE:
PREPAID ☐
COLLECT ☐

TOTAL CHARGES	\$
---------------	----

FREIGHT CHARGES	
-----------------	--

FREIGHT PREPAID Check box if charges
except when box at ☐ are to be
right is checked collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to des-

tion and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER US EPA REGION II
PER ON BEHALF OF US EPA REGION II
MIKE EMMOT

CARRIER *Clear Brook*

PER

DATE _____

Permanent post-office address of shipper.



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Liotta Bros. Recycling Corp.
Corner Of: Daly Blvd & Hampton Road
Oceanside, NY 11572
516-855-0232

Transaction No.
6849

Date	Time	Scale
In: 11/21/2014	10:31	1
Out: 11/21/2014	10:38	1

Vehicle ID:	LI004	ROLLOFF
Account ID:	5164327085	LIOTTA & SONS INC.
Material ID:	ASPHALT	DUMP BROKEN ASPHALT
Order ID:	LIOTTA	CUSTOM LIOTTA

NET TONS: 18.64 tn

Comments:
Operator: 4

Charge by Unit

Price: \$ 0.000 /tn

YDS	At \$	22.000	Each
Net:	\$	45.00	
Tax:	\$	0.00	
Total:	\$	45.00	

Signature:

Arrowhead

18741

Liotta & Sons, Inc. Roll-off Division

3966 Long Beach Road, Island Park, NY 11558 • 516-432-7085 • Fax: 516-432-6710
www.liottaandsons.com New York City B.I.C. Permit #1482

Name: ARROWHEAD Date: 11/12/14
Job location: END OF KALAMOND CT
City: GARDEN CITY State: NY Zip: 11530
Contact name: DE LOTTE Driver:
Phone #: Cell phone #: (913) 761-5257
Order date: 11/12 Order taken by: JANET
Delivery date: 11/13 (THUR) Delivery time: NORNING

Container Size		Container #	Amount
	5 Yard		
	10 Yard		
	15 Yard		
	20 Yard		
	30 Yard		
Comments:		Sub-total:	
CONCRETE		Tax:	
SPRINT		Add'l. charges:	
		Total:	

Method of payment

☐ Credit ☐ COD: Cash or check (circle one) ☒ Credit Card

Name on card:

Zip code:

Card number:

Exp. date:

I have thoroughly read, understand and agree to all the information/responsibilities on the front and back of this form.

Customer's Signature:

Container pick up date:

WHITE — Office Copy GREEN — Billing CANARY — Customer Copy PINK — Pick up GOLD — Inventory

Liotta Bros. Recycling Corp.
Corner Of: Daly Blvd & Hampton Road
Oceanside, NY 11572
516-855-0232

Transaction No.
6886

Vehicle ID: LIO04 ROLLOFF
Account ID: 5164327085 LIOTTA & SONS INC.
Material ID: ASPHALT DUMP BROKEN ASHALT
Order ID: LIOTTA1 CUSTOM LIOTTA

Date Time Scale
In: 11/25/2014 01:24 1
Out: 11/25/2014 01:35 1

Gross: 77080 lb (M)
Tare: 36240 lb
Net: 40840 lb

NET TONS: 20.42 tn

Comments:
Operator: 4

Charge by Unit 0 Price: \$ 0.000 /tn

YDS At \$ 22.000 Each
Net: \$ 45.00
Tax: \$ 0.00
Total: \$ 45.00

Signature: _____

Liotta & Sons, Inc. Roll-off Division

3966 Long Beach Road, Island Park, NY 11558 • 516-432-7085 • Fax: 516-432-6710
www.liottaandsons.com New York City B.I.C. Permit #1482

Name: _____ Date: _____
Job location: _____ Zip: _____
City: _____ State: _____
Contact name: _____ Driver: _____
Phone #: _____ Cell phone #: _____
Order date: _____ Order taken by: _____
Delivery date: _____ Delivery time: _____

Container Size	Container #	Amount
5 Yard		
10 Yard		
15 Yard		
20 Yard		
30 Yard		
Comments: _____		
Sub-total:		
Tax:		
Add'l. charges:		
Total:		

Method of payment ☐ Credit ☐ COD: Cash or check (circle one) ☒ Credit Card
Name on card: _____ Zip code: _____
Card number: _____ Exp. date: _____

I have thoroughly read, understand and agree to all the information/responsibilities on the front and back of this form.

Customer's Signature: _____ Container pick up date: _____
WHITE — Office Copy GREEN — Billing CANARY — Customer Copy PINK — Pick up GOLD — Inventory

Liotta Bros. Recycling Corp.
Corner Of: Daly Blvd & Hampton Road
Oceanside, NY 11572
516-855-0232

Transaction No.
6973

Vehicle ID: LIO04 ROLLOFF
Account ID: 5164327085 LIOTTA & SONS INC.
Material ID: CONC DUMP BROKEN CONCRETE
Order ID: LIOTTA1 CUSTOM LIOTTA

Date Time Scale
In: 12/09/2014 09:12 1
Out: 12/09/2014 09:18 1

Gross: 48840 lb (M)
Tare: 34780 lb
Net: 14060 lb

NET TONS: 7.03 tn

Comments:
Operator: 4

Charge by Unit

0

Price: \$ 0.000 /tn

YDS At \$ 22.000 Each
Net: \$ 45.00
Tax: \$ 0.00
Total: \$ 45.00

Signature: _____

18890
BILLY-
Liotta & Sons, Inc. Roll-off Division
3966 Long Beach Road, Island Park, NY 11558 • 516-432-7085 • Fax: 516-432-6710
www.liottaandsons.com
New York City B.I.C. Permit #1482

Name: Arrowhead Date: 11-25-14
Job location: End of Raymond CT
City: Green City NY State: NY Zip:
Contact name: Joe Liotta Driver:
Phone #: 747-1523 Cell phone #: 913-761-5257
Order date: 11-25 Order taken by: JLL
Delivery date: 11-25 Delivery time:

Container Size	Container #	Amount
5 Yard		
10 Yard		
15 Yard		
20 Yard		
30 Yard		
Sub-total:		
Tax:		
Add'l. charges:		
Total:		

Method of payment
☐ Credit ☐ COD: Cash or check (circle one) ☒ Credit Card
Name on card: Zip code:
Card number: Exp. date:

I have thoroughly read, understand and agree to all the information/responsibilities on the front and back of this form.

Customer's Signature: Container pick up date:
WHITE — Office Copy GREEN — Billing CANARY — Customer Copy PINK — Pick up GOLD — Inventory

2:20- D20796



NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.		2. Page 1 of	
3. Generator's Name and Mailing Address US EPA Region 2 257 Clinton Rd NY 11530 Garden City, NY 4. Generator's Phone (516) 637-4273							
5. Transporter 1 Company Name McVAC Environmental Services		6. US EPA ID Number CTR 000005058		A. State Transporter's ID PA-44 0801		B. Transporter 1 Phone 803-498-1427	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address Environmental Recovery Corporation 1076 Old Manheim Pike Lancaster PA 17601		10. US EPA ID Number PA0987266748		E. State Facility's ID		F. Facility's Phone	
11. WASTE DESCRIPTION Old Roosevelt Field directional drilling mud tank Non-KCRA Non-DOT a. 1507-02053-LPT Drilling Mud				Containers No. Type 001 TT		13. Total Quantity 5.38	
b.						14. Unit WT/Vol. T	
c.							
d.							
G. Additional Descriptions for Materials Listed Above				H. Handling Codes for Wastes Listed Above			
15. Special Handling Instructions and Additional Information							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
Printed / Typed Name Muzaffar Rahmani on Behalf				Signature M. A. Rahmani		Date Month Day Year 7/9/15	
17. Transporter 1 Acknowledgement of Receipt of Materials <input checked="" type="checkbox"/> EPA							
Printed / Typed Name Frederico Mancino				Signature [Signature]		Date Month Day Year 7/14/15	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed / Typed Name				Signature		Date Month Day Year	
19. Discrepancy Indication Space 5.38 TONS							
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.							
Printed / Typed Name Jolene Smith				Signature [Signature]		Date Month Day Year 7/14/15	



WEIGHED ON A FAIRBANKS SCALE

Environmental Recovery Corp.

1076 Old Manheim Pike

Lancaster, PA 17601

(717) 393-2627

Transporter: MCVAC

Generator: USEPA

Generator Address: _____

Product Description: _____

INBOUND 58600 lb
LOOP ID 986

Inbound Date: 7-14-15 Time: 2:36PM

Outbound Date: 7-14-15 Time: 4:23PM

58600 lb GROSS
47840 lb TARE
10760 lb NET

Driver On: LOOP ID 986 Off: _____

5.38 Tons

SIGNATURES

Transporter: [Signature]

Weigher: [Signature]

Weighmaster License #: 77350

No. 1588

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